

No. 22-11707

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**UNITED STATES COURT OF APPEALS  
FOR THE ELEVENTH CIRCUIT**

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PAUL A. EKNES-TUCKER, et al.,  
*Plaintiffs-Appellees,*

&

UNITED STATES OF AMERICA  
*Intervenor-Plaintiff-Appellee,*

v.

GOVERNOR OF THE STATE OF ALABAMA, et al.,  
*Defendants-Appellants.*

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◆

On Appeal from the United States District Court  
for the Middle District of Alabama  
Case No. 2:22-cv-184-LCB

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**APPELLANTS' APPENDIX VOLUME IV OF XIII**

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July 5, 2022

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Certificate of Service



**DOC. 69-5**

UNITED STATES DISTRICT COURT  
FOR THE MIDDLE DISTRICT OF ALABAMA  
NORTHERN DIVISION

REV. PAUL A. EKNES-TUCKER; )  
BRIANNA BOE, individually and on )  
behalf of her minor son, MICHAEL )  
BOE; JAMES ZOE, individually and )  
on behalf of his minor son, )  
ZACHARY ZOE; MEGAN POE, )  
individually and on behalf of her )  
minor daughter, ALLISON POE; )  
KATHY NOE, individually and on )  
behalf of her minor son, )  
CHRISTOPHER NOE; JANE MOE, )  
Ph.D; and RACHEL KOE, M.D. )

Plaintiffs, )

v. )

KAY IVEY, in her official capacity )  
As Governor of the State of Alabama; )  
STEVE MARSHALL, in his official )  
capacity as Attorney General of the )  
State of Alabama; DARYL D. )  
BAILEY, in his official capacity as )  
District Attorney for Montgomery )  
County; C. WILSON BAYLOCK, in )  
his official capacity as District )  
Attorney for Cullman County; )  
JESSICA VENTIERE, in her official )  
capacity as District Attorney for Lee )  
County; TOM ANDERSON in his )  
official capacity as District Attorney )  
for the 12th Judicial Circuit; and )  
DANNY CARR, in his official )  
Capacity as District Attorney for )  
Jefferson County. )

Defendants )

CIVIL ACTION #  
2:22-cv-00184-LCB-SRW

**Expert Report of Paul W. Hruz,  
M.D., Ph.D.**

Pursuant to 28 U.S.C. 1746, I declare:

1. RETAINED AS EXPERT WITNESS - VITAE: I have been retained by counsel for Defendants as an expert witness in connection with the above-captioned litigation. I have actual knowledge of the matters stated in this declaration. My professional background, experience, and publications are detailed in my curriculum vitae. A true and accurate copy of my CV is attached as Exhibit A to this declaration.

2. EDUCATION - ACADEMIC APPOINTMENTS: I received my Doctor of Philosophy degree from the Medical College of Wisconsin in 1993. I received my Medical Degree from the Medical College of Wisconsin in 1994. I am an Associate Professor of Pediatrics in the Division of Pediatric Endocrinology and Diabetes at Washington University School of Medicine. I also have a secondary appointment as Associate Professor of Cellular Biology and Physiology in the Division of Biology and Biological Sciences at Washington University School of Medicine. I served as Chief of the Division of Pediatric Endocrinology and Diabetes at Washington University from 2012-2017. I served as the Director of the Pediatric Endocrinology Fellowship Program at Washington University from 2008-2016. I am currently serving as Associate Fellowship Program Director at Washington University in St. Louis.

3. HISTORY OF BOARD CERTIFICATIONS: I am board certified in Pediatrics and Pediatric Endocrinology. I have been licensed to practice medicine in Missouri since 2000. I also have a temporary license to practice telemedicine in Illinois during the COVID-19 pandemic. My professional memberships include the American Diabetes Association, the Pediatric Endocrine Society, and the Endocrine Society.

4. SCIENTIFIC PUBLICATIONS IN PEER REVIEWED JOURNALS: I have published 60 scholarly articles over my academic career spanning over two decades. This includes

peer-reviewed publications in the leading journals in the fields of metabolism, cardiology, HIV, and ethics including the Gastroenterology, Circulation, Diabetes, Science Signaling, the Journal of Biological Chemistry and FASEB Journal. See my current Curriculum Vitae attached as Exhibit A.

5. EDITORIAL DUTIES - RESEARCH GRANTS: I have served as a Reviewer for a number of leading science journals in relevant fields including the Journal of Clinical Endocrinology and Metabolism, the Journal of Biological Chemistry, Diabetes, Scientific Reports and PlosOne. I have received over 4.6 million dollars in governmental and non-governmental funding for scientific research including grants from the National Institutes of Health, the American Diabetes Association, The American Heart Association, the March of Dimes, and the Harrington Discovery Institute. I am a member of the Alpha Omega Alpha Medical Honor Society and have received the Armond J. Quick Award for Excellence in Biochemistry, the Eli Lilly Award for Outstanding Contribution to Drug Discovery, and the Julio V. Santiago Distinguished Scholar in Pediatrics Award.

6. CLINICAL EXPERIENCE: During the more than 20 years that I have been in clinical practice, I have participated in the care of hundreds of infants and children, including adolescents, with disorders of sexual development. I was a founding member of the multidisciplinary Disorders of Sexual Development (DSD) program at Washington University. I continue to contribute to the discussion of complex cases and the advancement of research priorities in this field. In the care of these patients, I have acquired expertise in the understanding and management of associated difficulties in gender identification and gender transitioning treatment issues. I have trained and/or supervised hundreds of medical students, residents and clinical fellows in the practice of medicine.

7. PREVIOUS LEGAL CASES AS AN EXPERT WITNESS: Related to the litigation of issues of sex and gender, I have been designated as an expert witness in Joaquín Carcaño et al vs. Patrick McCrory (United States District Court, M.D. North Carolina), Jane Doe vs Board of Education of the Highland School District (United States District Court For the Southern District of Ohio Eastern Division, Case No. 2:16-CV-524), Ashton Whitaker vs. Kenosha Unified School District (United States District Court Eastern District of Wisconsin, Civ. Action No. 2:16-cv-00943), Adams vs. the School Board of St. John's County (United States District Court Middle District Of Florida Jacksonville Division, Case No. 3:17-cv-739-J-32JBT), Terri Bruce vs State of South Dakota (The United States District Court District of South Dakota Western Division, Case No. 17-5080), Kadel vs. Falwell (The United States District Court For The Middle District Of North Carolina, Case No.: 1:19-cv-272-LCB-LPA), Brandt v Rutledge (The United States District Court Eastern District of Arkansas Central Division, Case No. 4:21-CV-00450-JM), and Cause DF-15-09887-SD of the 255<sup>th</sup> Judicial Circuit of Dallas County, TX regarding the dispute between J.A. D.Y. and J.U. D.Y., Children. Only in the last case did I testify at trial. I have also served as a science consultant or subjected written testimony for court cases in Canada (B.C. Supreme Court File No. E190334) and Great Britain (Bell v Tavistock).

8. COMPENSATION: I am being compensated at an hourly rate for actual time devoted, at the rate of \$400 per hour including report drafting, travel, testimony, and consultation. My compensation does not depend on the outcome of this litigation, the opinions I express, or the testimony I provide.

9. CONSULTS-DISCUSSIONS REGARDING THE RELEVANT SCIENCE and CLINICAL ISSUES: In my role as a scientist and as the Director of the Division of Pediatric Endocrinology at Washington University, I extensively studied the existing scientific research

literature related to the incidence, potential etiology, and treatment of gender dysphoria as efforts were made to develop a Transgender Medicine Clinic at Saint Louis Children's Hospital. I have participated in local and national meetings where the endocrine care of children with gender dysphoria has been discussed in detail and debated in depth. I have met individually and consulted with several pediatric endocrinologists (including Dr. Norman Spack) and other professionals specializing in sexual health (including Eli Coleman) who have developed and led transgender programs in the United States. I have also consulted with, met with, and had detailed discussions with dozens of parents of children with gender dysphoria to understand the unique difficulties experienced by this patient population. I continue to evaluate the ongoing experimental investigation of this condition. I am frequently consulted by other medical professionals to help them understand the complex medical and ethical issues related to this emerging field of medicine.

10. In my opinion, there is a serious lack of quality scientific evidence regarding the safety and efficacy of gender affirming medical interventions for individuals who exercise sex discordant gender identity. Use of such medical interventions remains a highly controversial and largely experimental approach.

Pediatric patients referred to our practice for the evaluation and treatment of gender dysphoria are cared for by an interdisciplinary team of providers that includes a psychologist and pediatric endocrinologist who have been specifically chosen for this role based upon a special interest and professional knowledge and training in this rare patient population. Due to the documented, important, ethical concerns regarding the safety, efficacy, and scientific validity of controversial, unproven, and experimental treatment paradigms, I have not personally engaged in the delivery of gender affirming medical interventions to children with gender dysphoria. Given the

unproven long-term benefits and the well-documented risks and harms of “transitioning” children, I decline to participate in such experimental treatments until the science has proven that the relative risks and benefits of this approach warrant such procedures.

My decision is strengthened by the knowledge that the vast majority of children who report gender dysphoria will, if left untreated, grow out of the problem — a natural coping-developmental process — and willingly accept their biological sex. Despite differences in country, culture, decade, follow-up length and method, multiple studies have come to a remarkably similar conclusion: Very few gender dysphoric children still want to transition by the time they reach adulthood. Many turn out to have been struggling with sexual orientation issues rather than Gender Discordant “transgender” identity. The exact number of children who experience realignment of gender identity with biological sex by early adult life varies by study. Estimates within the peer reviewed published literature range from 50-98%, with most reporting desistance in approximately 85% of children prior to the widespread adoption of the “gender affirmation only” approach. Thus, desistance (i.e., the child accepting their natal, biological sex identity and declining “transitioning” treatments) is the outcome for the vast majority of affected children who are not actively encouraged to proceed with sex-discordant gender affirmation. Since there are no reliable assessment methods for identifying the small percentage of children with persisting sex-gender identity discordance from the vast majority who will accept their biological sex, and since puberty blocking treatments, hormone transition treatments, and surgical transition treatments are all known to have potentially life-long devastating, negative effects on patients, I and many colleagues view it as unethical to treat children with an unknown future by using experimental, aggressive, and intrusive gender affirming medical interventions. See J. Cantor,

Ph.D. summary of multiple research studies at [http://www.sexologytoday.org/2016/01/do-trans-kids-stay-trans-when-they-grow\\_99.html](http://www.sexologytoday.org/2016/01/do-trans-kids-stay-trans-when-they-grow_99.html), and other publications reviewed in detail below).

11. PEER-REVIEWED, PUBLISHED RESEARCH IN CREDIBLE SCIENCE-MEDICAL JOURNALS: My opinions as detailed in this declaration are based upon my knowledge and direct professional experience in the subject matters discussed. The materials that I have relied upon are the same types of materials that other experts in my field of clinical practice rely upon when forming opinions on the subject including hundreds of published, peer reviewed scientific research (and professional) articles. As discussed in detail in this declaration, the extant published literature on the use of puberty blockers, cross-sex hormones and gender affirming surgeries are based, almost entirely, upon studies with major methodological limitations (see Hruz, P. W. Deficiencies in Scientific Evidence for Medical Management of Gender Dysphoria. *Linacre Q* 87, 34-42, doi:10.1177/0024363919873762 (2020). This includes:

- Significant recruitment biases including internet based convenience sampling
- Relatively small sample sizes for addressing a condition that is likely to be multifactorial
- Short term follow up
- Lack of randomization to different treatment arms
- Failure to even consider alternate hypotheses
- Failure to include proper control groups and, in many studies NO control group at all
- Reliance on cross sectional sampling that may identify associations, but cannot establish causal relationships between intervention and outcome.



- A high rate of patients lost to follow up in longitudinal analyses which is relevant to questions of regret, desistance and completed suicide.
- Biased interpretation of study findings with a goal of validating *a priori* conclusions rather than seeking evidence to disprove the null hypothesis
- Ignoring starkly contradictory research documenting the lack of effectiveness of “transitioning” procedures, the low quality of research in this area, and the ongoing contentions and disagreements over this highly controversial, experimental medical field

12. PUBLIC DISCLOSURES OF THE METHODOLOGICAL FAILURES OF GENDER TRANSITIONING MEDICAL INTERVENTIONS: In addition to peer reviewed published research articles related to gender affirming medical interventions (see specific citations below), I also cite a wide variety of evidence documenting the recent, very public, disclosures of the multiple and serious methodological errors, failures, and defects of “transitioning treatment” research. Specific examples include:

THE BRANSTROM LONG-TERM TREATMENT OUTCOME STUDY: The historic Branstrom report is a peer reviewed, published, scientific journal article that documents a long-term treatment (10+ years) outcome research investigation testing the effects of hormonal and surgical “transitioning” treatments on patients. This historic research found *no reliable benefits from these disfiguring-sterilizing “treatments”* as well as evidence suggesting *increased* suicide attempts and anxiety disorders following the “gender transitioning” treatments. In addition, detailed methodological critiques discovered significant research errors by the authors that appear to support the investigative theory that the authors had initially attempted to manipulate

and misreport the findings of the study. (See, very detailed notes and review below with multiple citations). The authors ultimately recanted their initial misreporting and agreed that their study produced no reliable evidence of benefits for gender reassignment hormone and surgical treatments. The Branstrom study is truly a devastating and historic blow to the WORLD PROFESSIONAL ASSOCIATION FOR TRANSGENDER HEALTH's (WPATH) "treatment guidelines" and to the financially lucrative transgender "transitioning" treatment industry. Together with other evidence, this historic investigation has helped to generate a profound collapse of support for these experimental procedures across Europe. See *Correction of a Key Study: No Evidence of "Gender-Affirming" Surgeries Improving Mental Health*. [https://segm.org/ajp\\_correction\\_2020](https://segm.org/ajp_correction_2020). Accessed 29 June 2021. , Van Mol, A., Laidlaw, M., Grossman, M., & McHugh, P. (2020). *Gender-Affirmation Surgery Conclusion Lacks Evidence*. *Am. J. Of Psych.*, 177(8), 765-766. (see detailed review below).

NATIONAL FINLAND REVIEW RECOMMENDS SUSPENDING TRANSITIONING TREATMENTS FOR CHILDREN AS EXPERIMENTAL and of UNCERTAIN BENEFIT: A National Science Review in FINLAND carefully examined all relevant science and suspended transition treatments for minors under age 16. See One Year Since Finland Broke with WPATH "Standards of Care." [https://segm.org/Finland\\_devites\\_from\\_WPATH\\_prioritizing\\_psychotherapy\\_no\\_surgery\\_for\\_minors](https://segm.org/Finland_devites_from_WPATH_prioritizing_psychotherapy_no_surgery_for_minors). The official review recommends that psychotherapy should be the first line of treatment for gender dysphoric youth. See 2020 Recommendation of the Council for Choices in Health Care in Finland (PALKO / COHERE Finland) Medical Treatment Methods for Dysphoria Related to Gender Variance In Minors, "Cross-sex identification in childhood, even in extreme cases, generally disappears during puberty.... The first-line treatment for gender dysphoria is psychosocial support and, as necessary, psychotherapy and

treatment of possible comorbid psychiatric disorders. ... No gender confirmation surgeries are performed on minors.” ... “Potential risks of GnRH therapy include disruption in bone mineralization and the as yet unknown effects on the central nervous system”... “there are no medical treatments (for transitioning) that can be considered evidence-based... In cases of children and adolescents, ethical issues are concerned with the natural process of adolescent identity development, and the possibility that medical interventions may interfere with this process. It has been suggested that hormone therapy (e.g., pubertal suppression) alters the course of gender identity development; i.e., it may consolidate a gender identity that would have otherwise changed in some of the treated adolescents. The reliability of the existing studies with no control groups is highly uncertain, and because of this uncertainty, no decisions should be made that can permanently alter a still-maturing minor’s mental and physical development.... A lack of recognition of comorbid psychiatric disorders common among gender-dysphoric adolescents can also be detrimental. Since reduction of psychiatric symptoms cannot be achieved with hormonal and surgical interventions, it is not a valid justification for gender reassignment. A young person’s identity and personality development must be stable so that they can genuinely face and discuss their gender dysphoria, the significance of their own feelings, and the need for various treatment options. For children and adolescents, these factors are key reasons for postponing any interventions until adulthood.... In light of available evidence, gender reassignment of minors is an experimental practice.” See One Year Since Finland Broke with WPATH “Standards of Care.” [https://segm.org/Finland\\_devites\\_from\\_WPATH\\_prioritizing\\_psychotherapy\\_no\\_surgery\\_for\\_minors](https://segm.org/Finland_devites_from_WPATH_prioritizing_psychotherapy_no_surgery_for_minors).

SWEDEN'S FLAGSHIP KAROLINSKA HOSPITAL SUSPENDS TRANSITIONING TREATMENTS FOR CHILDREN UNDER 16 AND REQUIRES RESEARCH OVERSIGHT FOR PATIENTS UNDER 18: In Sweden, the world-renowned Karolinska Hospital reviewed the current research and suspended pediatric gender transitions for patients under 16 outside of experimental, monitored clinical trials settings as of May 2021. Treatment will focus on psychotherapy and assessment. See Sweden's Karolinska Ends All Use of Puberty Blockers and Cross-Sex Hormones for Minors Outside of Clinical Studies. [https://segm.org/Sweden\\_ends\\_use\\_of\\_Dutch\\_protocol](https://segm.org/Sweden_ends_use_of_Dutch_protocol). See also, Karolinska Policy Change K2021-3343 March 2021 (in English).pdf; Karolinska Hospital Ends the Use of Puberty Blockers for patients under 16: New policy statement from the Karolinska Hospital. The "Dutch protocol" for treating gender dysphoric minors has been discontinued over concerns of medical harm and uncertain benefits. This new Swedish policy is consistent with Finland's recently revised guidelines and changes in England's policies as well as the Arkansas legislation in the U.S. All have been changed to prioritize psychological interventions and social support in contrast to medical interventions, particularly for youth with no young childhood history of gender dysphoria (presently the most common patient presentation)" See Society for Evidence Based Gender Medicine Press Release at [https://segm.org/Sweden\\_ends\\_use\\_of\\_Dutch\\_protocol](https://segm.org/Sweden_ends_use_of_Dutch_protocol) and Karolinska Policy Change K2021-3343 March 2021 (English, unofficial translation).pdf Karolinska Guideline K2021-4144 April 2021 (English, unofficial translation).pdf

SWEDEN National review documents the lack of quality research in this controversial field. See Sweden Policy Review, Gender dysphoria in children and adolescents: an inventory of the literature, SBU Policy Support no 307, 2019 (<https://www.sbu.se/307e>) "This report

was commissioned by the Swedish government and is a scoping review of the literature on gender dysphoria in children and adolescents. The report can be a basis for further evaluation of risk of bias and evidence.”...” The Swedish national review reported: “No relevant randomized controlled (treatment outcome) trials in children and adolescents were found.” The review also reported ... “Conclusions: — We have not found any scientific studies which explains the increase in incidence in children and adolescents who seek the health care because of gender dysphoria — We have not found any studies on changes in prevalence of gender dysphoria over calendar time, nor any studies on factors that can affect the societal acceptance of seeking for gender dysphoria. — There are few studies on gender affirming surgery in general in children and adolescents and only single studies on gender affirming genital surgery. — Studies on long-term effects of gender affirming treatment in children and adolescents are few, especially for the groups that have appeared during the recent decennium....— Almost all identified studies are observational, some with controls and some with evaluation before and after gender affirming treatment. No relevant randomized controlled trials in children and adolescents were found. ... We have not found any composed national information from Sweden on: — the proportion of those who seek health care for gender dysphoria that get a formal diagnosis nor — the proportion starting endocrine treatment to delay puberty nor — the proportion starting gender affirming hormonal treatment nor — the proportion subjected to different gender affirming surgery.”

UK RESEARCHERS, COURTS, and OTHER REVIEWERS HIGHLIGHTED THE PAUCITY OF RESEARCH, LIMITATIONS, DEFECTS, and RISKS IN THE STILL EXPERIMENTAL “GENDER TRANSITIONING” TREATMENT FIELD:

The British official medical review office (NICE) published reports on transitioning science. See Cohen, D. and Barnes, H., BBC, “Evidence for puberty blockers use very low, says

NICE” ... “The evidence for using puberty blocking drugs to treat young people struggling with their gender identity is "very low", an official review has found. The National Institute of Health and Care Excellence (NICE) said existing studies of the drugs were small and "subject to bias and confounding." The assessment of the evidence into the drugs was commissioned by NHS England. It is part of a review into gender identity services for children and young people. See <https://arms.nice.org.uk/resources/hub/1070905/attachment>. The NICE review noted it was difficult to draw conclusions from existing studies because of the way they had been designed. They were “all small” and did not have control groups, which are used to directly compare the effect of different treatments. There were other issues with the studies too, such as not describing what other physical and mental health problems a young person may have alongside gender dysphoria.

NICE also reviewed the evidence base for cross-sex hormones. See <https://arms.nice.org.uk/resources/hub/1070871/attachment>. The review found the evidence of clinical effectiveness and safety of cross-sex hormones was also of “very low” quality. “Any potential benefits of gender-affirming hormones must be weighed against the largely unknown long-term safety profile of these treatments in children and adolescents with gender dysphoria,” NICE said. Both documents were prepared by NICE in October 2020 and will now help inform Dr. Hilary Cass's independent review into NHS gender identity services for children and young people. See also Carmichael P, Butler G, Masic U, et al. Short-term outcomes of pubertal suppression in a selected cohort of 12 to 15 year old young people with persistent gender dysphoria in the UK. medRxiv 2020.12.01.20241653; doi:<https://doi.org/10.1101/2020.12.01.20241653>. This British study conclusion noted: “We found no evidence of change (no improvement) in psychological function with GnRHa treatment as indicated by parent report (CBCL) or self-re-

port (YSR) of overall problems, internalizing or externalizing problems or self-harm....” Puberty blockers used to treat children aged 12 to 15 who have severe and persistent gender dysphoria had no significant effect on their psychological function, thoughts of self-harm, or body image, a study has found. However, as expected, the children experienced reduced growth in height and bone strength by the time they finished their treatment at age 16. See, also Dyer, C. Puberty blockers: children under 16 should not be referred without court order, says NHS England. *BMJ* 2020;371:m4717.doi:10.1136/bmj.m4717 pmid:33268453. See, Dyer, C., Puberty blockers do not alleviate negative thoughts in children with gender dysphoria, finds study, *BMJ* 2021;372:n356 doi: <https://doi.org/10.1136/bmj.n356> (Published 08 February 2021); see also Dyer, C. Puberty blockers do not alleviate [suicidal] negative thoughts in children with gender dysphoria, finds study. *BMJ* 372, n356, doi:10.1136/bmj.n356 (2021).  
<https://www.medrxiv.org/content/10.1101/2020.12.01.20241653v1> BBC summary: <https://www.bbc.com/news/uk-55282113journal.pone.0243894>. pmid:33529227. See also, “Tavistock’s Experimentation with Puberty Blockers: Scrutinizing the Evidence,” *TransgenderTrend.com*, March 5, 2019. Regarding the UK’s Tavistock and Portman NHS Trust’s Gender Identity Development Service’s experimental trial of puberty blockers for early teenagers with gender dysphoria. Oxford’s Professor Michael Biggs wrote, “To summarize, GIDS launched a study to administer experimental drugs to children suffering from gender dysphoria.”... “After a year on GnRHa [puberty blockers] children reported greater self-harm, and girls experienced more behavioral and emotional problems and expressed greater dissatisfaction with their body—so puberty blockers actually exacerbated gender dysphoria.”

See also Griffin, L., Clyde, K., Byng, R., Bewley, S., Sex, gender and gender identity: a re-evaluation of the evidence. BJPsych Bulletin (2020) doi:10.1192/bjb.2020.73, Cambridge University Press, 21 July 2020, As Griffin, et al discussed, “As there is evidence that many psychiatric disorders persist despite positive affirmation and medical transition, it is puzzling why transition would come to be seen as a key goal rather than other outcomes, such as improved quality of life and reduced morbidity. When the phenomena related to identity disorders and the evidence base are uncertain, it might be wiser for the profession to admit the uncertainties”. ... “In addition, Griffin et al wrote: “Transgender support groups have emphasized the risk of suicide. After controlling for coexisting mental health problems, studies show an increased risk of suicidal behaviour and self-harm in the transgender population, although underlying causality has not been convincingly demonstrated. (See Marshall E, Claes L, Bouman WP, Witcomb GL, Arcelus J. Non-suicidal self-injury and suicidality in trans people: a systematic review of the literature. Int Rev Psychiatry 2016; 28: 58–69.). In sum, political activists and too many providers have used a fear of suicide to push experimental unproven, hazardous treatments.

REVIEW OF WPATH: A 2021 review found WPATH standards “incoherent.” See Dahlen, Sara, et al. “International Clinical Practice Guidelines for Gender Minority/Trans People: Systematic Review and Quality Assessment.” BMJ Open, vol. 11, no. 4, Apr. 2021, p. e048943. Both WPATH and Endocrine Society guidelines have recently been assessed for quality by a systematic review, which found them to be of low quality. Specific to WPATH, the reviewers noted the difficulty of even extracting clear recommendations, describing the WPATH guidelines as “incoherent.” Standards of care should provide practitioners with evidence-based standards by which they may reliably inform the patient of projected outcomes, and do so with a



known error rate. Such data is the starting point for obtaining informed consent, which is not provided by either of these guidelines.

THE INDEPENDENT REVIEW OF GENDER IDENTITY SERVICES FOR CHILDREN AND YOUNG PEOPLE: INTERIM REPORT by Dr. Cass in the UK published in February 2022 concluded that “Evidence on the appropriate management of children and young people with gender incongruence and dysphoria is *inconclusive* both nationally and internationally.” Dr. Cass notes that “There is lack of consensus and open discussion about the nature of gender dysphoria and therefore about the appropriate clinical response.” (see <https://cass.independent-review.uk/publications/interim-report/>)

THE SOCIETY FOR EVIDENCE BASED GENDER MEDICINE (SEGM) REVIEW SUMMARIZES THE HEALTH RISKS of TRANSITIONING: Consistent with changes in Sweden, Finland, England, and Arkansas, SEGM published a research summary documenting the serious health risks of “transitioning treatments” compared to the well-known lack of evidence of reliable benefits for such treatments. See Science Studies – Health Risks of Medical and Surgical Gender Reassignment.” SEGM at. <https://www.segm.org/studies>.

EXPERTS ARE CONCERNED WITH UNEXPLAINED DEMOGRAPHIC SHIFTS IN PATIENTS FOR WHOM PREVIOUS RESEARCH IS OF UNKNOWN USEFULNESS — For decades transgender patients were mostly older adults or very young boys. Over the last few years a tsunami of teenaged girls has flipped the demographics of transgender patients—now up to 7 to 1 teen girls. Many experts have noted that the previous research on trans patients cannot be relied upon when the patient group has so rapidly and mysteriously been transformed. In sum, the newly presenting cases are vastly overrepresented by adolescent females, the majority of whom also have significant mental health problems and neurocognitive comorbidities such as

autism-spectrum disorder or ADHD. See de Graaf, Nastasja M., and Polly Carmichael. “Reflections on Emerging Trends in Clinical Work with Gender Diverse Children and Adolescents.” *Clinical Child Psychology and Psychiatry*, vol. 24, no. 2, Apr. 2019, pp. 353–64. The most recent evidence supports the emerging theory of social contagion as estimates of gender dysphoria-transgenderism are rocketing upwards from 1 in 10,000 to “the number of U.S. transgender-identified youth may be as high as 9%.” See Kidd, Kacie M., et al. “Prevalence of Gender-Diverse Youth in an Urban School District.” *Pediatrics*, vol. 147, no. 6, June 2021, p. e2020049823. This unexplained, radical transformations of demographics does not happen in actual illnesses (cancer, heart disease, anxiety disorders, etc), but is tragically consistent with previous mental health system disasters such as the once very rare “multiple personality disorder” and “recovered repressed memory” patients that radically increased in the 1990s. Dr. Thomas Steensma, a prominent investigator of the Dutch protocol—the original model for transitioning treatments—has recently noted that “[w]e don’t know whether studies we have done in the past can still be applied to this time,” specifically because of the unexplained surge in female adolescents reporting gender dysphoria. “Many more children are registering, but also of a different type... Suddenly there are many more girls applying who feel like a boy... now there are three times as many females as males.” He concluded with the warning that “[w]e conduct structural research in the Netherlands. But the rest of the world is blindly adopting our research.” See <https://www.voorzij.nl/more-research-is-urgently-needed-into-transgender-care-for-young-people-where-does-the-large-increase-of-children-come-from/>

A MARCH 2021 STUDY—WITH THE LARGEST SAMPLE YET—IS CONSISTENT WITH THE NEW DIRECTION OF FINLAND, SWEDEN, THE UK, and FRANCE—SHOWS THAT MOST YOUNG GENDER DYSPHORIA CHILDREN GROW

OUT OF THE PROBLEM WITH NO MEDICAL INTERVENTION. See Devita Singh<sup>1</sup>, Susan J. Bradley<sup>2</sup> and Kenneth J. Zucker, *Frontiers in Psychiatry*, March 2021, Volume 12, Article 632784, [www.frontiersin.org](http://www.frontiersin.org). “Watchful Waiting” is the recommended treatment: In the past, 67% of children meeting the diagnostic criteria for gender dysphoria no longer had the diagnosis as adults, with an even higher, 93% rate of natural resolution of gender-related distress for the less significantly impacted cases. See also, e.g. Zucker, K. J. (2018). The myth of persistence: Response to “A critical commentary on follow-up studies and ‘desistance’ theories about transgender and gender non-conforming children” by Temple Newhook et al. (2018). *International Journal of Transgenderism*, 19(2), 231–245.

THE COCHRANE REVIEW FOUND INSUFFICIENT EVIDENCE OF BENEFITS: The widely respected Cochrane Review examined hormonal treatment outcomes for male-to-female transitioners over 16 years. They found “insufficient evidence to determine the efficacy or safety of hormonal treatment approaches for transgender women in transition.” It is remarkable that decades after the first transitioned male-to-female patient, quality evidence for the benefit of transitioning is still lacking. See Haupt, C., Henke, M. et. al., *Cochrane Database of Systematic Reviews Review - Intervention, Antiandrogen or estradiol treatment or both during hormone therapy in transitioning transgender women*, 28 November 2020 and <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD013138.pub2/full>.

13. A reasonable understanding of relative risk versus benefit for medical products or procedures is a fundamental obligation in providing appropriate clinical care. This is the bed-rock standard of “evidence based medical practice.” As detailed throughout this declaration, this foundational standard has never been met by the gender transition industry. As noted by Levine et al. “The risks of gender-affirmative care are ethically managed through a properly conducted

informed consent process. Its elements-deliberate sharing of the hoped-for benefits, known risks and long-term outcomes, and alternative treatments-must be delivered in a manner that promotes comprehension. The process is limited by: erroneous professional assumptions; poor quality of the initial evaluations; and inaccurate and incomplete information shared with patients and their parents” (Levine, S. B., Abbruzzese, E., & Mason, J. W. (2022). Reconsidering Informed Consent for Trans-Identified Children, Adolescents, and Young Adults. *Journal of sex & marital therapy*, 1–22. Advance online publication. <https://doi.org/10.1080/0092623X.2022.2046221>).

Differences between the gender transition industry’s approach to gender dysphoria and the treatment of other medical conditions include not only the poor quality of evidence regarding safety and efficacy, but also attempts to silence standard scientific discussion and consideration of alternative hypotheses, failures to acknowledge existing data showing persistence of suicidality after intervening, the intentional impairment and destruction of normally formed and functioning male and female sexual organs to address psychological-psychiatric distress, the manipulation of language from standard medical definitions to accommodate novel ideology, and widespread failures in properly reporting research data related to gender transitioning. Each of these differences are discussed in detail in my declaration with appropriate examples and relevant scientific and professional citations.

When considering clinical practice guidelines, it is essential that physicians recognize the relative risks and benefits of such documents. If done properly, they can distill large data sets into actionable clinical recommendations. However, there is a long history of clinical practice guidelines that have later been found to be deficient, resulting in wasted medical resources, failure to achieve desired benefits, or to have caused substantial harm to patients. (See, e.g., Woolf, S. H., Grol, R., Hutchinson, A., Eccles, M., & Grimshaw, J. (1999). Clinical guidelines:

potential benefits, limitations, and harms of clinical guidelines. *BMJ (Clinical research ed.)*, 318(7182), 527–530. <https://doi.org/10.1136/bmj.318.7182.527>)

14. It is highly misleading to imply that the current Endocrine Society guidelines, first published in 2009 and revised in 2017 represent the opinions of the Societies 18,000 members. (Hembree, W. C., Cohen-Kettenis, P., Delemarre-van de Waal, H. A., Gooren, L. J., Meyer, W. J., 3rd, Spack, N. P., Tangpricha, V., Montori, V. M., & Endocrine Society (2009). Endocrine treatment of transsexual persons: an Endocrine Society clinical practice guideline. *The Journal of clinical endocrinology and metabolism*, 94(9), 3132–3154. <https://doi.org/10.1210/jc.2009-0345>; Hembree, W. C., Cohen-Kettenis, P. T., Gooren, L., Han-nema, S. E., Meyer, W. J., Murad, M. H., Rosenthal, S. M., Safer, J. D., Tangpricha, V., & T'Sjoen, G. G. (2017). Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline. *The Journal of clinical endocrinology and metabolism*, 102(11), 3869–3903. <https://doi.org/10.1210/jc.2017-01658>). The committee that drafted these guidelines was composed of *less than a dozen* self-selected members. The guidelines were never submitted to the entire membership for comment and approval prior to publication. They also did not undergo external review. Such political methodologies are common in association “statements” and “endorsement” and not at all scientific nor reliable nor valid.

15. The hazard of making treatment recommendations based on studies with major methodological weaknesses can be readily seen by considering representative studies used by advocates of medical gender affirmation to justify this approach.

15A. For example, the study by De Vries and colleagues (de Vries AL, Steensma TD, Doreleijers TA, Cohen-Kettenis PT. Puberty suppression in adolescents with gender identity disorder: a prospective follow-up study. *J Sex Med.* 2011;8(8):2276-2283) is often cited to support

longitudinal evidence of benefit from pubertal blockade. Although improvements in mood improved and the risk of behavioral disorders with pubertal blockade were found over baseline, in this study there was no control group. Thus, the authors were unable to determine the basis of this improvement. The authors acknowledge that psychological support or other reasons may have contributed to (or wholly caused) this observation. It is also important to note that gender dysphoria itself *did not diminish* in study subjects, and there were *no changes* in body image-related distress.

15B. The study by Turban and colleagues (Turban, J. L., King, D., Carswell, J. M., & Keuroghlian, A. S. (2020). Pubertal Suppression for Transgender Youth and Risk of Suicidal Ideation. *Pediatrics*, 145(2), e20191725) is often cited as proof that pubertal blockade prevents suicide in transgender youth. However, this study used an unreliable, biased sampling methodology. As stated in the paper, the authors considered “a cross-sectional online survey of 20,619 transgender adults aged 18 to 36 years” from the 2015 U.S. Transgender Survey. This was an online survey of transgender and “genderqueer” adults recruited from trans-friendly websites. Among the many problems with this sampling methodology, there is NO evidence of study subject identities, NO way to assess for potential false subjects, and NO medical diagnosis for entry. No causation can be determined from this retrospective, cross-sectional design. Furthermore, the study failed to even assess Desisters and Regretters. Turban claimed that desisters and regretters would “not be likely” in this study group, which also only included adults. Thus, the study “does not include outcomes for people who may have initiated pubertal suppression and subsequently no longer identify as transgender.” Turban’s misleading claim of lower suicidal ideation for treated patients excluded the most seriously mentally ill patients that would have been DENIED affirmation treatment. Those who received treatment with pubertal suppression, when compared

with those who wanted pubertal suppression but did not receive it, had lower odds of lifetime suicidal ideation (adjusted odds ratio = 0.3; 95% confidence interval = 0.2– 0.6). In Table 3 of the paper, under “Suicidality (past 12 months)” reductions for suppressed group v non-suppressed were seen for ideation (50.6% v 64.8%) and “ideation with plan” (55.6% v 58.2%). However, it is important to note that suicidal “ideation with plan and suicide attempt” for the suppressed group INCREASED after treatment to 24.4% v 21.5% for the “non-treatment group.” The most clinically significant result in this study — that “Affirmation Treatments INCREASED SERIOUS SUICIDE ATTEMPTS — was IGNORED BY THE AUTHORS (i.e., not statistically significant but clinically significant) = “Suicide attempts resulting in inpatient care” = 45.5% for suppression groups vs 22.8% for those who did not receive pubertal suppression. It would be most reasonable to conclude from an observation of 45% attempted suicide in the treated arm that the intervention was unsuccessful in improving health. Turban et al. ignored their own finding that a history of puberty suppression was associated with an INCREASE in recent serious suicide attempts. In sum, the Turban 2020 Pediatrics study, based on an unverified US Transgender Online Survey, tells us little about the effects of puberty suppression on children with gender dysphoria. (See, Michael Biggs, Puberty Blockers and Suicidality in Adolescents Suffering from Gender Dysphoria. Archives of Sexual Behavior, accepted 14 May 2020, DOI: 10.1007/s10508-020-01743-6 and the multiple Letters to the Editor that criticized the multiple methodological errors in this study, <https://pediatrics.aappublications.org/content/145/2/e20191725/tab-e-letters#re-pubertal-suppression-for-transgender-youth-and-risk-of-suicidal-ideation>)

15C. The 2021 study of Bustos, et al., (Bustos, V. P., Bustos, S. S., Mascaro, A., Del Corral, G., Forte, A. J., Ciudad, P., Kim, E. A., Langstein, H. N., & Manrique, O. J. (2021). Regret

after Gender-affirmation Surgery: A Systematic Review and Meta-analysis of Prevalence. *Plastic and reconstructive surgery. Global open*, 9(3), e3477) attempts to provide a systematic review of 27 observational or interventional studies that report on regret or detransition following gender-transition surgeries. A total of 7928 subjects were included in their meta analysis. The authors concluded that only 1% or less of those who had gender-transition surgeries expressed regret. It is important to understand the serious methodological limitations and high risk of bias contained within the analysis in the 2021 Bustos et al. study (see Expósito-Campos, P., & D'Angelo, R. (2021). Letter to the Editor: Regret after Gender-affirmation Surgery: A Systematic Review and Meta-analysis of Prevalence. *Plastic and reconstructive surgery. Global open*, 9(11), e3951). This includes failure to include major relevant studies addressing this question (e.g. Dhejne, C., Öberg, K., Arver, S., & Landén, M. (2014). An analysis of all applications for sex reassignment surgery in Sweden, 1960-2010: prevalence, incidence, and regrets. *Archives of sexual behavior*, 43(8), 1535–1545), inaccurate analysis within one of the studies considered (Wiepjes CM, Nota NM, de Blok CJM, et al. The Amsterdam Cohort of Gender Dysphoria Study (1972–2015): Trends in Prevalence, Treatment, and Regrets. *J Sex Med* 2018; 15: 582–590) and the general lack of controlled studies, incomplete and generally short-term follow-up, large numbers of lost subjects, and lack of valid assessment measures in the published literature addressing this question. As noted by Expósito-Campos and D'Angelo (2021), moderate to high risk of bias was present in 23 of the 27 studies included in the analysis. Furthermore, 97% of subjects analyzed were found within studies deemed to be of fair to poor scientific quality. Thus, this study cannot be used as strong support for the contention that regret is rare.

15D. The 2018 paper by Wiepjes, et al. (Wiepjes, C. M., Nota, N. M., de Blok, C., Klaver, M., de Vries, A., Wensing-Kruger, S. A., de Jongh, R. T., Bouman, M. B., Steensma, T.



D., Cohen-Kettenis, P., Gooren, L., Kreukels, B., & den Heijer, M. (2018). The Amsterdam Cohort of Gender Dysphoria Study (1972-2015): Trends in Prevalence, Treatment, and Regrets. *The journal of sexual medicine*, 15(4), 582–590) is a retrospective review of records from all patients of the Center of Expertise on Gender Dysphoria gender clinic in Amsterdam from 1972-2015. While the study appears to report on the regret rates among a large cohort of adolescents (812) and children (548), regret is only reported for children and adolescents who had undergone gonadectomy once over 18 years of age. Of the adolescents, 41% started puberty suppression. Of those who started GnRH agonists, only 2% stopped this intervention (meaning that 98% of those who started puberty suppression progressed to cross-sex hormone therapy). An additional 32%, having already completed puberty, started cross-sex hormone therapy without use of a GnRH agonist. Classification of regret was very stringent, requiring physician documentation of patient verbalized regret after gonadectomy and start of sex-concordant hormones to treat the iatrogenic hypogonadism. This means there are significant limitations to the conclusions that can be drawn from 2018 paper by Wiepjes, et al. There is no discussion in this paper regarding adolescent regret of use of puberty blockers, cross-sex hormones or mastectomies. Importantly 36% of patients were lost to follow up. This is notable given that gonadectomy iatrogenically induces the pathologic state of primary hypogonadism. Affected patients have a lifelong dependency for exogenously administered sex-steroid hormones, and thus an acute need for ongoing follow-up. The number of lost subjects who experienced regret or completed suicides is unknown. It is also significant that the average time to regret was 130 months. The authors themselves acknowledge that it may be too early to predict regret in patients who started hormone therapy in the past 10 years.

15E. The 2021 study by Narayan et al (Narayan, S. K., Hontscharuk, R., Danker, S., Guerriero, J., Carter, A., Blasdel, G., Bluebond-Langner, R., Ettner, R., Radix, A., Schechter, L., & Berli, J. U. (2021). Guiding the conversation-types of regret after gender-affirming surgery and their associated etiologies. *Annals of translational medicine*, 9(7), 605) examines anonymous survey results from 154 surgeons affiliated with WPATH. The response rate for this survey was 30%. Of the respondents, 57% had encountered patients with surgical regret. It is important to recognize that this study was specifically directed toward patients who had undergone surgical transition. Acknowledged biases of this study include selection bias, recall bias, and response bias. This type of study cannot accurately identify the prevalence in the transgender population as a whole, and is particularly limited in the ability to assess potential for regret in the pediatric population.

15F. The 2018 Olson-Kennedy paper (Olson-Kennedy J, Warus J, Okonta V, Belzer M, Clark LF. Chest Reconstruction and Chest Dysphoria in Transmasculine Minors and Young Adults: Comparisons of Nonsurgical and Postsurgical Cohorts. *JAMA Pediatr*. 2018;172(5):431–436) presents the results of a survey of biologically female patients with male gender identity at the lead author’s institution using a novel rating system for “chest dysphoria” created by the study authors. There were an equal number (68) of nonsurgical and post-surgical subjects surveyed. Those who had undergone bilateral mastectomies were reported to have less chest dysphoria than those who did not receive this intervention. Limitations of this study include convenience sampling of nonsurgical study subjects with high potential for selection bias, cross-sectional design, and lack of validation of the primary outcome measure. Test validation is particularly relevant in assessing adolescent questionnaires due to a variety of cognitive and situational

factors in this population (see Brener, N.D., J. Billy, and W.R. Grady. 2003. “Assessment of Factors Affecting the Validity of Self-Reported Health-Risk Behavior among Adolescents: Evidence from the Scientific Literature.” *Journal of Adolescent Health* 33 (6): 436–57). Rigorous validation methods have been previously used in several other established questionnaires addressing adolescent self-perception (see Palenzuela-Luis, N., Duarte-Clíments, G., Gómez-Salgado, J., Rodríguez-Gómez, J. Á., & Sánchez-Gómez, M. B. (2022). Questionnaires Assessing Adolescents' Self-Concept, Self-Perception, Physical Activity and Lifestyle: A Systematic Review. *Children (Basel, Switzerland)*, 9(1), 91). As previously noted, this study cannot provide information about a causal relationship between the intervention and outcome observed.

15G. The 2021 Almazan study (Almazan, A.N. & A.S. Keuroghlian. (2021). Association Between Gender-Affirming Surgeries and Mental Health Outcomes. *JAMA Surgery*, 156(7): 611–618) attempts to address mental health outcomes in relation to gender-transition surgery. As previously noted, this study relies upon data from the 2015 US Transgender Survey. Limitations and weaknesses of this survey tool includes convenience sampling, recruitment of patients through transgender advocacy organizations, demand bias (a.k.a. the good subject effect), a high number of respondents who reported having not transitioned medically or surgically (and reported no desire to do so in the future), and several data irregularities. One notable data irregularity was that a high number of respondents reported that their age was exactly 18 years. As noted by D’Angelo and colleagues, these irregularities raise serious questions about the reliability of the USTS data (D’Angelo, R., et al. (2021). One Size Does Not Fit All: In Support of Psychotherapy for Gender Dysphoria. *Archives of sexual behavior*, 50(1): 7–16. <https://doi.org/10.1007/s10508-020-01844-2>), and therefore, the reliability of conclusions based on that data.

15H. In his declaration, Dr. Rosenthal cites the 2021 paper by Green et al (Association of Gender-Affirming Hormone Therapy With Depression, Thoughts of Suicide, and Attempted Suicide Among Transgender and Nonbinary Youth. *J Adolescent Health* 1-7 (2021) to support his assertion that gender affirming therapy lowers depression and suicide. Similar to the major methodological weaknesses noted above, this study relied upon a non-probability convenience sample of youth who identified as LGBTQ. Recruitment was made by targeted ads on Facebook, Twitter and Snapchat. In addition to the inherent bias of such study methodology, the data obtained by cross-sectional analysis cannot determine whether there is a causal relationship between access to gender affirming medical interventions and changes in depression or suicide.

15I. Rosenthal's citation of the paper by Turban et al (Access to gender-affirming hormones during adolescence and mental health outcomes among transgender adults. *PLoS ONE* 17(1) 2021; <https://doi.org/10.1371/journal.pone.0261039>) is similarly misleading as this study relied upon data from the same 2015 US transgender survey for which the major methodological weaknesses were discussed in detail above (§15B)

16. There are major and highly significant differences between male and female responses to many drugs including sex hormones. (See, e.g., Madla, C. M., Gavins, F., Merchant, H. A., Orlu, M., Murdan, S., & Basit, A. W. (2021). Let's talk about sex: Differences in drug therapy in males and females. *Advanced drug delivery reviews*, 113804. Advance online publication. <https://doi.org/10.1016/j.addr.2021.05.014>). Giving estrogen to a biological male is not equivalent to giving the same hormone to a biological female. Likewise, giving testosterone to a biological female is not equivalent to giving the same hormone to a biological male. (See for example Soldin, O. P., & Mattison, D. R. (2009). Sex differences in pharmacokinetics and pharmacodynamics. *Clinical pharmacokinetics*, 48(3), 143–157 and Pogun S., Yazarbas G. (2010) Sex

Differences in Drug Effects. In: Stolerman I.P. (eds) Encyclopedia of Psychopharmacology. Springer, Berlin, Heidelberg.). Differences are not limited to pharmacokinetic effects but are present even at the cellular level. (See, e.g., Walker, C. J., Schroeder, M. E., Aguado, B. A., Anseth, K. S., & Leinwand, L. A. (2021). Matters of the heart: Cellular sex differences. *Journal of molecular and cellular cardiology*, S0022-2828(21)00087-0. Advance online publication. <https://doi.org/10.1016/j.yjmcc.2021.04.010>). Failure to acknowledge these differences can have tragic consequences. For example, in addition to the inherent sterilizing effect of cross-sex hormone administration, non-physiological levels of estrogen in males has been shown to increase the risk of thromboembolic stroke above the incidence observed in females (e.g. Getahun, D., Nash, R., Flanders, W. D., Baird, T. C., Becerra-Culqui, T. A., Cromwell, L., Hunkeler, E., Lash, T. L., Millman, A., Quinn, V. P., Robinson, B., Roblin, D., Silverberg, M. J., Safer, J., Slovis, J., Tangpricha, V., & Goodman, M. (2018). Cross-sex Hormones and Acute Cardiovascular Events in Transgender Persons: A Cohort Study. *Annals of internal medicine*, 169(4), 205–213. <https://doi.org/10.7326/M17-2785>).

17. The claim that adolescents with persistent gender dysphoria after reaching Tanner Stage 2 *almost always* persist in their gender identity in the long-term whether or not they were provided gender affirming care is not supported by high quality scientific evidence. Frequent citation of a book chapter by Turban, De Vries and Zucker does not provide evidence in support of this claim. Within the chapter cited it states, “The natural history of gender identity for children who express gender nonconforming or transgender identities is an *area of active research*.” Only a single reference is found, and this is itself another book (Cohen-Kettenis PT, Pfäfflin F: Transgenderism and Intersexuality in Childhood and Adolescence: Making Choices.

London, Sage, 2003). Within the text of the Cohen-Kettenis book, *there is no experimental evidence to support the assertion that nearly all Tanner stage adolescents have persistent transgendered identity*. In fact, in Chapter 4 of this text, evidence is presented that the majority of evaluated subjects did not have persistence but rather eventually presented as homosexual adults. Cited references for this outcome include: Green, R. (1987). The “sissy boy syndrome” and the development of homosexuality. New Haven, CT: Yale University Press.; Money, J., & Russo, A. J. (1979). Homosexual outcome of discordant gender identity/role: Longitudinal follow-up. *Journal of Pediatric Psychology*, 4, 29-41.; Zucker, K. J., & Bradley, S. J. (1995). *Gender identity disorder and psychosexual problems in children and adolescents*. New York/London: Guilford Press.; Zuger, B. (1984). Early effeminate behavior in boys: Outcome and significance for homosexuality. *Journal of Nervous and Mental Disease*, 172, 90-97.

18. Serious Methodological Limitations, Flaws, and Defects in the Gender Transition Industry’s Methods for the Diagnostic-Labeling of “Gender Dysphoria”: The DSM (Diagnostic and Statistical Manual of the American Psychiatric Association) involves an often controversial consensus seeking, (not scientific evidence seeking), political-voting process that began historically as an attempt to construct a reliable dictionary for psychiatry. The DSM has historically included unreliable, since debunked, diagnoses such as “multiple personality disorder” that fueled a harmful “craze” damaging vulnerable patients until scientists, legal professionals, juries, and licensing boards put a stop to it. (See the detailed discussion below). It is important for legal professionals to understand that the DSM was created using a consensual, political process of committees and voting and does not depend upon an evidence-based, uniformly valid and reliable scientific process. Small groups of professionals, often with ideological agendas, can form

committees and create “diagnoses” to be “voted” into the DSM. Much of DSM content is decided by the “voting” of small committees of advocates and activist practitioners whose judgment may suffer from significant financial conflicts of interest — as appears to be the case with all three of the plaintiffs’ experts in this case.

19. Well-Documented Methodological Limitations, Flaws, and Defects in Gender Identity (“Transgender”) Subjective Clinical Assessments: The clinical assessment methodology in sex discordant gender medicine is currently limited to self-report information from patients without objective scientific markers, medical tests, or scientific assessment tools. There are no reliable radiological, genetic, physical, hormonal, or biomarker tests that can establish gender identity or reliably predict treatment outcomes. A few hours of conversation with often poorly trained social workers often provides the only gatekeeping process to severe and irreversible iatrogenic surgical and hormonal injuries. Most importantly, *the long-term effects of “transitioning” have never been scientifically validated*. No valid-reliable methodology for such assessments has been accepted by the relevant scientific community and it appears that no known error rates for such assessments have ever been published. A more detailed discussion of the foundational science documenting the limitations and methodological defects in this field is offered below.

20. Essential Methodological Problems in the Gender Transition Industry: The research is characterized by sampling errors, the misreporting of findings, the misreporting of relevant history, misquoting of research studies, low quality research designs, failures to complete randomized clinical trials, and widespread confirmation bias, including the failure to properly explore alternative hypotheses (e.g., social contagion, mental illness, complex developmental processes, family dynamics, etc.), and other failures of basic scientific methodology. It is essential to properly consider alternative theories/hypotheses for the rapid and nearly exponential increase

of transgender cases—such as social contagion, mental illness, and/or complex developmental processes—especially as reportedly driven by news media, social media “YouTube “influencers” (who reportedly sell “transitioning” to vulnerable youth on social media), educational systems (that reportedly pressure 1st graders to “identify as non-binary”), as well as political-activist “pro-transition” health care workers (too few of whom seem to have carefully reviewed and understood the relevant scientific history and ongoing controversies in this field).

21. TERMINOLOGY - BIOLOGICAL SEX: Biological sex is a term that specifically refers to a member of a species in relation to the member’s capacity to either donate (male) or receive (female) genetic material for the purpose of reproduction. Sex thus cannot be “assigned at birth” because it is permanently determined by biology at conception. This remains the standard definition that has been accepted by the relevant scientific community and used worldwide by scientists, medical personnel, and society in general for decades. The scientific and clinical measurement of sex is done with highly reliable and valid objective methodologies. Visual medical examination of the appearance of the external genitalia is the primary methodology used by clinicians to recognize sex. In cases where genital ambiguity is present, additional testing modalities including chromosomal analysis, measurement of hormone levels, radiographic imaging of internal sexual anatomy and biological response to provocative testing are utilized. The measurement and assessment of biological sex has been documented by valid-reliable research published in credible journals, and is accepted by the relevant scientific community. The error rate for the measurement and assessment of biological sex is very low, below 1%.

22. TERMINOLOGY - GENDER: Gender, a term that had traditionally been reserved for grammatical purposes, is currently used to describe the psychological and cultural characteristics of a person in relation to biological sex. Gender in such new definitions would therefore



exist only in reference to subjective personal perceptions and feelings and societal expectations, but not biology. The term “gender” is currently used in a variety of ways and has thus become a controversial and unreliable term that means different things to different observers often varying according to political and ideological positions. The only definition of gender accepted by the worldwide, relevant scientific (biology, genetics, neonatology, zoology, medicine, etc.) community retains the historic biological connection to reproductive purpose with other definitions mired in controversy. The reliability and validity of various usages of the term “gender” is currently quite controversial and the relevant scientific community has accepted no use other than in relation to biological sex, which includes participate in activities related to reproduction. The serious dangers of incorrectly using the term “gender” is acknowledged by the Endocrine Society (Bhargava, A., Arnold, A. P., Bangasser, D. A., Denton, K. M., Gupta, A., Hilliard Krause, L. M., Mayer, E. A., McCarthy, M., Miller, W. L., Raznahan, A., & Verma, R. (2021) Considering Sex as a Biological Variable in Basic and Clinical Studies: An Endocrine Society Scientific Statement. *Endocrine reviews*, bnaa034. Advance online publication.

<https://doi.org/10.1210/endrev/bnaa034>). In addition, the error rate for multiple uses of the term “gender” outside of the accepted biologically related use is unknown, untested, and unpublished. The measurement and assessment of biological sex and gender has been documented by valid-reliable research published in credible journals, and is accepted by the relevant scientific community. The error rate for the measurement and assessment of biological sex and gender is very low, below 1%.

23. TERMINOLOGY - GENDER IDENTITY: Gender identity refers to a person’s individual experience and perception and unverified verbal patient reports of how they experience being male or female or a combination of these or other categories. The term “gender identity” is

currently controversial. It is a term that means very different things to different observers often varying according to political, ideological, religious, and other factors. There is no current worldwide definition of “gender identity” accepted by the relevant scientific (cf. clinical) community. The reliability and validity of the term “gender identity” is controversial and not accepted by the relevant scientific community. The measurement error rate for non-biological “gender identity” is unknown, untested, and unpublished and could be very high.

24. TERMINOLOGY - SEXUAL ORIENTATION: Sexual orientation refers to a person’s enduring pattern of arousal and desire for intimacy with males, females, or both.

25. TERMINOLOGY - DNA and CHROMOSOMES: Sex is genetically encoded at the moment of conception due to the presence of specific DNA sequences (i.e. genes) that direct the production of signals that influence the formation of the bipotential gonad to develop into either a testis or ovary. This genetic information is normally present on X and Y chromosomes. Chromosomal sex refers to the normal complement of X and Y chromosomes (i.e. normal human males have one X and one Y chromosome whereas normal human females have two X chromosomes). Genetic signals are mediated through the activation or deactivation of other genes and through programmed signaling of hormones and cellular transcription factors. The default pattern of development in the absence of external signaling is female. The development of the male appearance (phenotype) depends upon active signaling processes.

26. BIOLOGICAL SEX IS BINARY—NOT A CONTINUUM—FOR 99%+ of MAMMALS INCLUDING HUMANS: For members of the human species (and virtually all mammals), sex is normatively aligned in a binary fashion (i.e., either male or female) in relation to biologic purpose. The presence of individuals with disorders of sexual development (along the

range of the established Prader scale) does not alter this fundamental reality. Medical recognition of an individual as male or female is correctly made at birth in nearly 99.98% of cases according to external phenotypic expression of primary sexual traits (i.e., the presence of a penis for males and presence of labia and vagina for females). The recognition of an individual as male or female made at birth according to biological features has been documented by valid-reliable research published in credible journals, and is generally accepted by the relevant scientific community. The error rate for the measurement and assessment of an individual as male or female made at birth according to biological features is very low indeed, certainly below 1%.

27. THE GENITAL-BIOLOGICAL FUNCTION OF REPRODUCTION: Due to genetic and hormonal variation in the developing fetus, normative development of the external genitalia in any individual differs with respect to size and appearance while maintaining an ability to function with respect to biologic purpose (i.e. reproduction). Internal structures (e.g. gonad, uterus, vas deferens) normatively align in more than 99.9%+ of mammals with external genitalia, including humans. In my opinion, this view is generally accepted by the relevant scientific communities in endocrinology, neonatology, developmental biology, genetics, and other relevant fields. In my opinion, all relevant sciences agree that the development of genital structures is intrinsically oriented to biological reproduction.

28. BIOLOGICAL ASSESSMENT OF SEX: Reliance upon external phenotypic expression of primary sexual traits is a highly accurate, reliable and valid means to assign biologic sex. In over 99.9% of cases, this designation will correlate with internal sexual traits and capacity for normal biologic sexual function. Sex is therefore not “assigned at birth” but is rather recognized at birth. In my opinion, this view is generally accepted by the relevant scientific communities in endocrinology, psychiatry, neonatology, biology, genetics, gynecology, and other fields.

29. DISORDERS OF SEXUAL DEVELOPMENT ARE VERY RARE: Due to the complexity of the biological processes that are involved in normal sexual development, it is not surprising that a very small number of individuals are born with defects in this process (1 in 5,000 births). Defects can occur through either inherited or *de novo* mutations in genes that are involved in sexual determination or through environmental insults during critical states of sexual development. Persons who are born with such abnormalities are considered to have a disorder of sexual development (DSD). Most often, this is first detected as ambiguity in the appearance of the external genitalia. Such detection measurements are reliable and valid and accepted by the relevant scientific community. In my opinion, this view is generally accepted by the relevant scientific communities in endocrinology, neonatology, gynecology, psychiatry, biology, genetics, and other fields. See Leonard Sax (2002) How common is Intersex? A response to Anne Fausto-Sterling, *The Journal of Sex Research*, 39:3, 174-178, DOI: 10.1080/00224490209552139

DISORDERS OF SEXUAL DEVELOPMENT ARE NOT A THIRD SEX: Normal variation in external genital appearance (e.g. phallic size) does not alter the basic biologic nature of sex as a binary trait. “Intersex” conditions represent disorders of normal development, not a third sex. In my opinion, this view is generally accepted by the relevant scientific communities in endocrinology, urology, surgery, neonatology, gynecology, psychiatry, biology, genetics, and other fields.

30. DISORDERS OF SEXUAL DEVELOPMENT REQUIRE ASSESSMENTS OF OBJECTIVE EVIDENCE: The medical care of persons with disorders of sexual development (DSDs) is primarily directed toward identification of the etiology of the defect and treatment of any associated complications. Similar to other diseases, diagnostic tools such as the Prader scale are used to assess, measure, and assign a “stage” to the severity of the deviation from normal

(e.g. assessments of objective, reliable evidence). In children with DSDs, characterization based upon phenotype alone does not reliably predict chromosomal sex nor does it necessarily correlate with potential for biological sexual function. Decisions on initial sex assignment in these very rare cases require detailed assessment of objective, reliable medical evidence by a team of expert medical providers. In my opinion, this view is generally accepted by the relevant scientific communities in endocrinology, urology, surgery, neonatology, gynecology, psychiatry, biology, genetics, and other fields.

31. INTERSEX CONDITIONS REQUIRE PROPER CONSIDERATION OF ALTERNATIVE HYPOTHESES AND TREATMENT PLANS: Standard medical practice in the treatment of persons with DSDs has evolved with growing understanding of the physical, psychological, and psychiatric needs and outcomes for affected individuals. Previously, it was felt that a definitive sex assignment was necessary shortly after birth with the belief that this would allow patients with a disorder of sexual development to best conform to the assigned sex and so parents-caregivers could help socialize the child to the assigned sex. Current practice is to defer sex assignment until the etiology of the disorder is determined and, if possible, a reliable prediction can be made on likely biologic and psychologic outcomes. When this cannot be done with confidence, a presumptive sex assignment is made. Factors used in making such decisions include chromosomal sex, phenotypic appearance of the external genitalia, and parental desires. The availability of new information can, in rare circumstances, lead to sex reassignment. Decisions on whether to surgically alter the external genitalia to align with sex are generally deferred until the patient is able to provide consent. See Lee, P. A. et al. Global Disorders of Sex Development Update since 2006: Perceptions, Approach and Care. *Horm Res Paediatr* 85, 158-180, doi:10.1159/000442975 (2016)). In my opinion, this view is generally accepted by the relevant

scientific communities in endocrinology, urology, surgery, neonatology, gynecology, psychiatry, biology, genetics, and other fields.

32. METHODOLOGICAL DEFECTS of the GENDER TRANSITION INDUSTRY -  
WHY IS THE TRANSGENDER MEDICINE FIELD STILL SO CONTROVERSIAL AFTER  
DECADES OF RESEARCH?:

- Despite several highly defective research efforts, the gender transition industry has failed to prove long term benefits that outweigh the reported harms, dangers, and serious injuries of “gender affirmation” interventions—including inability to reach orgasm, vaginal atrophy, compromised cognitive function, lifelong reliance on medication and repeated surgical intervention to deal with the cumulative effects of these iatrogenic harms, stunted growth, damage to social support systems, and increased risk of serious suicide attempts.
- The gender transition industry has repeatedly presented false, deceptive, and misleading information to the public and to patients regarding the known risks, dangers, injuries and benefits of “affirmation treatments.” (E.g. the Bränström, Turban, and related research errors of omission and misreporting.)
- The Gender Transition Industry has failed to generate reliable and valid treatment outcome research sufficient to support this risky medical experiment. (E.g., the national reviews of England (NICE), Sweden, Finland, Cochrane review, etc).
- Because of the lack of competent, valid, peer reviewed published research support, the gender transition industry relies upon support from “professional associations.” Yet such associations are engaged in consensus-seeking-political voting methodologies and not evidence-based, peer reviewed science. Such political-

professional associations have made similar, disastrous mistakes in the past. For example, the American Medical Association supported racist, “junk” science eugenics “treatments” in the 1930s and the American Psychiatric Association did not act to prevent or halt the harms of the repressed-memory/multiple personality industry of the 1990s.

33. METHODOLOGICAL DEFECTS of the GENDER TRANSITION INDUSTRY INCLUDE LIMITATIONS and HAZARDS OF RELYING ON UNVERIFIED PATIENT SELF-REPORT DATA WITH NO OBJECTIVE EVIDENCE: In contrast to disorders of sexual development, gender dysphoria cannot be reliably, objectively assessed, as it is based on patient self-reports. (There are no blood tests, no x-rays, no lab results, and no objective data.) Individuals who verbally report experiencing significant distress due to perceived discordance between gender identity and sex cannot currently be reliably, validly, and objectively assessed as experiencing “gender dysphoria.” (See American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 5th edn, (2013).) Although gender perceptions, feelings, and “identity” usually align with biological sex, some individuals report experiencing discordance in these distinct traits. Specifically, for example, biologic females may report experiencing that they identify as males and biologic males may report experiencing that they identify as females. As gender by definition is distinct from biological sex, one’s gender identity does not change a person’s biological sex. There is currently no known reliable and valid methodology for assessing the accuracy or nature of unverified, verbal reports of discordant “identity.” There is thus no known “error rate” for relying upon such reports to engage in hormonal and surgical treatments that might result in lasting, irreversible damages to normal, healthy organs and the destruction of normal biological functions (e.g. sterility), as the current research documents. In my opinion, this

view is generally accepted by the relevant scientific communities in endocrinology, urology, surgery, neonatology, gynecology, psychiatry, biology, genetics, and other fields.

34. METHODOLOGICAL DEFECTS of the GENDER TRANSITION INDUSTRY include the KNOWN LIMITATIONS OF RELYING ON UNVERIFIED, PATIENT SELF-REPORT DATA UNRELIABLY ASSESSED BY HEALTH CARE PROFESSIONALS. The relevant science documents that mental health care professionals are unreliable human “lie detectors” (“often no better than flipping a coin”). Currently, there is no known methodology for reliably discerning true from false patient reports without corroborating evidence such as radiology, lab tests, or other objective evidence. The gender transition industry’s sole reliance upon patient self-report data carries unknown risks of errors, misinformation, deception and lasting harm to patients from treatments that deliberately damage healthy organs and destroy essential normal bodily processes (e.g. often causing sterility). Assessment of gender dysphoria currently depends almost entirely upon unverified, self-reported evidence provided by patients. A patient’s spoken or written reports of alleged “memories” of symptoms and behaviors are the only source of evidence for the diagnosis in many cases. This is a source of potentially profound unreliability in patient care as the relevant science documents that physicians are poor “lie detectors”—often no more reliable in discerning false reports than flipping a coin—and sometimes much worse. The relevant research also documents that even though humans (including therapists) are poor “lie detectors,” many poorly trained physicians and mental health professionals personally—and falsely—believe they are “experts” at this complex and difficult task. See, e.g., Vrij, Aldert, Granhag, P. and Porter, S. (2010) Pitfalls and opportunities in nonverbal and verbal lie detection. *Psychological Science In The Public Interest*, 11 (3). pp. 89-121. ISSN 1529-1006 10.1177/1529100610390861. The final error that I will highlight is that professional lie catchers



tend to overestimate their ability to detect deceit. Research has consistently shown that when professional lie catchers and laypersons are compared, “professionals are more confident in their veracity judgments but are NO more accurate” (emphasis added). See also Rosen, G. M. and Phillips, W.R., A Cautionary Lesson from Simulated Patients, *Journal of the American Academy of Psychiatry and Law*, 32, 132-133, (2004).

35. METHODOLOGICAL DEFECTS of the GENDER TRANSITION INDUSTRY include the reliance upon (often poorly trained) mental health professionals to assess unverified patient reports. Although much of medicine became science-based in the 20th century, the mental health field reportedly continues to lag behind.

The gender transition industry often involves social workers or other mental health professionals “assessing” patients reporting gender dysphoria to determine if they will “benefit” from “affirmation” medical interventions. Given the extraordinary lack of competent, methodologically sound research justifying the use of gender affirmation “treatments” (as demonstrated in independent reviews by England, Sweden, Finland, the Cochrane review, and others, see below), there is no method for mental health professionals to reliably determine who might “benefit” from experimental interventions. Such unreliable assessment protocols risk harm to patients as they depend upon the widespread, unreliable method of having psychotherapists depend upon “clinical judgment” methodologies to make life-changing decisions and offer “professional” opinions with little or no scientific validity. See, e.g., Mischel, W. Connecting Clinical Practice to Scientific Progress, *Psychological Science in the Public Interest*, November 2008, vol 9, no 2 i-ii. The past President of the Association for Psychological Science, Prof. Walter Mischel,

stated “the current disconnect between psychological science and clinical practice is an unconscionable embarrassment.” See Mischel, W. Connecting Clinical Practice to Scientific Progress, *Psychological Science in the Public Interest*, Vol 9, No 2, 2009.

Over the past century many components of the health care system—surgery, radiology, laboratory testing, internal medicine, pharmacological systems, etc.—became science-driven and far more effective and reliable. Courts are often unaware that this transformation—moving from widespread use of unreliable methodologies to the widespread use of reliable science-based methodologies—has, in many ways, not yet occurred in the mental health system. See, e.g., West, Catherine, ‘An Unconscionable Embarrassment,’ *Association for Psychological Science, Observer*, October 2009, see <http://www.psychologicalscience.org/index.php/publications/observer/2009/october-09/an-unconscionable-embarrassment.html>; See, also Baker, T., McFall, R. & Shoham, V., *Current Status and Future Prospects of Clinical Psychology: Toward a Scientifically Principled Approach to Mental and Behavioral Health Care*, *Psychological Science in the Public Interest*, Vol. 9, No. 2 (2009); see also Harrington, A., *Mind Fixers: Psychiatry's Troubled Search for the Biology of Mental Illness*, W. W. Norton & Company; 1st edition, April 16, 2019; see also Dawes, R.M., *House of cards: Psychology and psychotherapy built on myth*, New York: Free Press (1997); see also Garb, H. N., & Boyle, P. A (2003). *Understanding why some (mental health) clinicians use pseudoscientific methods: Findings from research on clinical judgment*. In S. O. Lilienfeld, S. J. Lynn, & J. M. Lohr (Eds.), *Science and pseudo-science in clinical psychology* (pp. 17–38). New. York, NY: Guilford Press.

36. DYSPHORIC REPORTS ARE COMMON FROM CHILDREN WITH A RANGE OF ILLNESSES: Reports of feelings of anxiety, depression, isolation, frustration, and embarrassment are not unique to children with gender dysphoria, but rather are common to children

who differ physically or psychologically from their peers. Difficulties are accentuated as children progress through the normal stages of neuro-cognitive and social development. In my clinical practice of pediatric endocrinology, this is most commonly seen in children with diabetes. Attempts to deny or conceal the presence of disease rather than openly acknowledge and address specific needs can have devastating consequences including death. With proper acknowledgment of the similarity and differences between children with gender dysphoria and other developmental challenges, prior medical experience in treating a range of reported troubles can guide the development of effective approaches to both alleviate suffering and minimize harm to school aged and adolescent children experiencing gender dysphoria.

37. COURTS SHOULD BE AWARE THAT CLINICAL EXPERIENCE IN THE MENTAL HEALTH FIELDS—WHERE CLINICIANS OFTEN LACK ACCURATE FEEDBACK—IS OFTEN OF LIMITED VALUE: As the gender transition industry routinely permits poorly qualified social workers or other mental health professionals to subjectively make life changing decisions in gender dysphoria cases—such mental health professionals often unreliably overestimate their ability to offer such “crystal ball” assessments and predictions. Few of these professionals seem aware of the research showing the grave limitations on the experience, judgment, and methodologies of mental health professionals. See, e.g., Tracey, T.J., Wampold, B.E., Lichtenberg, J.W., Goodyear, R. K., (2014) Expertise in Psychotherapy: An Elusive Goal, *American Psychologist*, Vol. 69, No. 3, 218-229. “In a review of expertise across professions, Shanteau, J. (1992). [Competence in experts: The role of task characteristics. *Organizational Behavior and Human Decision Processes*, 53(2), 252–266.] identified several professions in which practitioners develop expertise, which he defined as increased quality of performance that is gained with additional experience. These professions, which demonstrate there can be a relation

between experience and skill, include astronomers, test pilots, chess masters, mathematicians, accountants, and insurance analysts. Shanteau also identified several professions for which experiential expertise was not demonstrated, including [mental health professionals]. He attributed the differences between the two types of professions to the *predictability of their outcomes and the unavailability of quality feedback*.” For example, airline pilots, or even more clearly Navy fighter pilots who land on aircraft carriers practice their professions in full view of hundreds of people. If they err, people die. If they are, off course, unstable, or inaccurate in their performance, immediate consequences, retraining or loss of profession is the immediate outcome. In contrast, a social worker, psychologist, or psychiatrist, sitting alone in a room with a troubled patient can make erroneous statements, use unreliable methodologies (e.g., naively believing whatever patients tell them or believing that they are “professional human lie detectors”), believe false and misleading notions about human memory, demonstrate ignorance of the serious defects in transgender treatment research, and fail to properly inform patients of the risks and benefits of treatments, etc. Mental health professionals can make such egregious errors for decades without receiving timely, accurate feedback. Without accurate feedback there is a failure of the learning process and improvements are difficult or not possible. Such limiting processes can continue for many years of practice. This is why mental health professions have been listed as doing the type of work that often does not lead to improvements in “clinical experience”—even over many years of practice. Gender discordant (“transgender”) patients are rarely, if ever, informed of these limitations on mental health professionals’ knowledge, training, or experience nor the limitations of mental health “assessments” based on unverified self-reported “memory” data.

38. The World Professional Association for Transgender Health (WPATH), the American Academy of Pediatrics (AAP), and the Endocrine Society: This methodological critique and

history of association errors and misadventures is quite informative when assessing the “professional association” consensus seeking methodologies including voting and political activities such as those of WPATH, the AAP, the American Endocrine Society and similar groups as they adopt support for the “politically correct” but scientifically defective, ideologically driven gender transition industry. Consensus seeking (voting) methods are not scientific evidence-based methodologies. Courts should take care not to be deceived by the “positions” of Associations—no matter how large or vocal. The net effect of many the gender transition industry’s methods and procedures is the sterilization of tens of thousands of children, adolescents, and adults. This is a sobering reminder of previous, now infamous, medical misadventures. (See Hruz, PW, Mayer, LS, and McHugh, PR, "Growing Pains: Problems with Puberty Suppression in Treating Gender Dysphoria," *The New Atlantis*, Number 52, Spring 2017 pp. 3 -36; See also McHugh, P., *Psychiatric Misadventures*, *The American Scholar*, Vol. 62, No. 2 (Spring 1993), pp. 316-320).

39. The Diagnostic and Statistical Manual of the American Psychiatric Association (DSM): A final example of the methodological limitations of relying upon “association voting” methods is the Diagnostic and Statistical Manual of the American Psychiatric Association. The DSM (and also the International Classification of Diseases- ICD) system(s) have confused some courts in the past. Simply put, reliability data, validity methodological analyses, and error rates are not supplied nor supported by the Diagnostic and Statistical Manual of the American Psychiatric Association (DSM).

The current American Psychiatric Association’s *Diagnostic and Statistical Manual of Mental Disorders* (Version 5) employs the term “Gender Dysphoria” and defines it with separate sets of criteria for adolescents and adults on the one hand, and children on the other. It is important to appreciate the DSM for what it is and what it is not. The DSM began as an attempt to create a

dictionary for psychiatry. The process by which DSM classifications are created involves voting by committee—this is not a reliable-valid scientific process. The committees’ recommendations are approved or rejected by superordinate committees. DSM content is largely decided by consensus-seeking methodologies—such as “voting” by small committees of (sometimes) advocates and activist practitioners whose judgment may suffer from significant financial conflicts of interest. The limitations of the DSM methodology are well known in the relevant scientific community. In my opinion, these views are generally accepted by the relevant scientific community.

In sum, professional association “positions” are not based upon competent, credible, reliable and valid scientific methodologies. Professional association “positions” on gender affirmation assessments and treatments remain very socially, medically, and scientifically controversial—and increasingly so. The association “positions”—since they are produced by voting and not methodologically reliable-valid evidence—have not been generally accepted by the relevant scientific community and they have no known, nor published, error rates.

40. PATIENTS’ RIGHTS TO TESTED, PROVEN TREATMENTS and INFORMED CONSENT HAVE BEEN VIOLATED IN THE PAST BY ETHICAL FAILURES IN THE MEDICAL and MENTAL HEALTH SYSTEMS. Using experimental procedures on uninformed, vulnerable patients is unethical and improper. Some of the most tragic chapters in the history of medicine include violations of informed consent and improper experimentation on patients using methods and procedures that have not been tested and validated by methodologically sound science—such is the case with the gender transition industry. The history of the infamous Tuskegee studies, the Nazi and Imperial Japanese wartime experiments, lobotomies (e.g., Dr. Egas Moniz received the 1949 Nobel Prize in Medicine for inventing lobotomies as a “treatment” for schizophrenia. See <https://www.nobelprize.org/prizes/medicine/1949/moniz/article/>),

recovered memory therapy-multiple personality disorders, rebirthing therapy (see, e.g., Janofsky, M. Girl's Death Brings Ban on Kind of 'Therapy'. New York Times. April 18, 2001; see also Peggy Lowe, Rebirthing team convicted: Two therapists face mandatory terms of 16 to 48 years in jail, Rocky Mountain News, April 21, 2001), coercive holding therapy (see, Hyde, J. "Holding therapy appears finished, State orders the last practitioner of holding therapy to end controversial method" Deseret News, Feb 13, 2005), and other tragic examples should serve as a stark warning to medical providers to properly protect the rights of patients and their families to a proper informed consent process and to not be subjected to experimental, unproven interventions such as gender transition "treatments." It is now universally agreed that medical and psychotherapy patients have a right to proper informed consent. Professional ethics codes, licensing rules and regulations, hospital rules and regulations, state and federal laws, and biomedical conventions and declarations all protect patients' right to informed consent discussions of the risks and benefits of proposed treatments and alternative treatments including no treatment. See Jonson AR, Siegler M, Winslade, WJ: Clinical Ethics, New York: McGraw Hill, 1998, ("Informed consent is defined as the willing acceptance of a medical intervention by a patient after adequate disclosure by the physician of the nature of the intervention, its risks, and benefits, as well as of alternatives with their risks and benefits.") See also Katz, A., Webb, S., and Committee on Bioethics, Informed Consent in Decision-Making in Pediatric Practice, Pediatrics, August 2016, 138 (2) e20161485; DOI: <https://doi.org/10.1542/peds.2016-1485> at <https://pediatrics.aappublications.org/content/138/2/e20161485>

Tragically, however, as I will discuss in detail below, we now have much evidence supporting increasing concerns that the true risks and benefits of Sex Discordant Gender

(“transgender”) transition “treatments” are NOT being properly and ethically presented to patients by providers (surgeons, endocrinologists, therapists, etc). Similarly, many of the published “pro-transition” research studies reviewed in this declaration have misrepresented to the public the actual risks and benefits of gender affirming medical interventions. The gender transition industry has produced research claiming evidence supporting the use of controversial “treatments” when, in fact, their own study data more likely support the alternative hypothesis that so-called “transition” intervention procedures might produce higher risks of anxiety and more serious suicide attempts requiring hospitalization. Expert witnesses in cases involving issues related to sex discordant gender transition interventions are duty bound and required by licensing rules to truthfully and fully disclose to courts and legal professionals the well-documented risks, international controversies, and published misrepresentations involving the still unproven gender transition methods and procedures.

42. ONE OF THE MOST SERIOUS OF ALL METHODOLOGICAL ERRORS, CONFIRMATION BIAS, PLAGUES THE RESEARCH OF THE GENDER TRANSITION INDUSTRY: Confirmation bias is one of the most serious and potentially dangerous errors in the assessment-diagnosis-treatment process of medicine. One of the key methodologies in science and in proper investigations-assessments of all kinds—including expert witness review and testimony—is the generation and testing of multiple alternative investigative hypotheses. From US Public Junior High Schools (typically first taught to 8th Graders) through competent M.A., M.S.W., and all Ph.D. and M.D. graduate programs, students and professionals at all levels are taught that the central methodology for science and for a proper assessment-diagnosis-treatment or expert witness report involves the generation and testing of alternative investigative hypotheses. Investigative hypotheses, once generated, should be rationally, properly, and fairly explored



to see if actual, factual evidence supports or refutes the hypotheses. A common and serious error in improper assessments-diagnoses-treatments is “confirmation bias,” the failure to generate and then explore alternative hypotheses. With confirmation bias, the often poorly trained and/or biased physician, investigator, expert, or therapist applies a narrow “tunnel vision” process to support a single, favorite, biased, pre-conceived hypothesis in a case. (See Garb, H. N., & Boyle, P. A (2003). Understanding why some clinicians use pseudoscientific methods: Findings from research on clinical judgment. In S. O. Lilienfeld, S. J. Lynn, & J. M. Lohr (Eds.), *Science and pseudoscience in clinical psychology* (pp. 17–38). New York, NY: Guilford Press.; see also Plous, Scott (1993). *The Psychology of Judgment and Decision Making*. p. 233; Nickerson, Raymond S. (June 1998). "Confirmation Bias: A Ubiquitous Phenomenon in Many Guises". *Review of General Psychology* 2 (2): 175–220. doi:10.1037/1089-2680.2.2.17; Joshua Klayman and Young-Won Ha, Confirmation, Disconfirmation, and Information in Hypothesis Testing, *Psychological Review*, 1987, Vol.94, No. 2, 211-228.) Currently, too many gender transition industry providers appear to violate the requirement to properly generate, explore, and disclose alternative hypotheses for assessments/diagnoses and treatments. In my opinion such failures, including the demand that all alternative hypotheses and treatments be banned as forms of “conversion” therapy, risk institutionalizing confirmation bias—a dangerous form of negligent practice. See Smith, T. Summary of AMA Journal of Ethics article on cognitive biases, Four widespread cognitive biases and how doctors can overcome them (e.g., confirmation bias, anchoring bias, affect heuristic, and outcomes bias) at <https://www.ama-assn.org/delivering-care/ethics/4-widespread-cognitive-biases-and-how-doctors-can-overcome-them>. (“Physicians are human and, therefore, constantly vulnerable to cognitive bias. But this imperfection is not just theoretical. It can have huge effects on patient care.”)

43. CONFIRMATION BIAS CAN PREVENT COMPLEX, COMPREHENSIVE DIAGNOSIS AND TREATMENT EXPLORING ALTERNATIVE HYPOTHESES: By demanding the immediate and un-investigated “affirmation” of a sex discordant gender identity patient’s requests for so-called “transitioning”—without conducting a detailed, proper, medical assessment of alternative hypotheses—the gender transition industry is attempting to enforce and institutionalize the methodological failure of “confirmation bias.” By disparaging as “conversion therapy” all forms of psychotherapy, coping-and-resilience training, cognitive behavioral therapy for depression/anxiety, the gender transition industry is failing to treat individual patients according to the basic requirements and principles of competent medical assessment, diagnosis, and treatment. The current scientific evidence does not support the current treatments nor methods endorsed and aggressively marketed and demanded by the gender transition industry. Its general refusal to properly investigate or even consider alternative hypotheses, alternative diagnoses, and alternative treatments is, in my view, unethical misconduct. For example, many peer reviewed, properly conducted, published research reports demonstrate that cognitive-behavioral therapy is a very low-risk, safe, and highly effective treatment for depression and anxiety disorders. See, e.g., Mor N, Haran D. Cognitive-behavioral therapy for depression. *J Psychiatry Relat Sci*. 2009;46(4):269-73. PMID: 20635774, <https://pubmed.ncbi.nlm.nih.gov/20635774/>; (A review of “Twenty-nine Random Control Trials were included in three separate meta-analyses. Results showed multi-modal CBT was more effective than no primary care treatment ( $d = 0.59$ ), and primary care treatment-as-usual (TAU) ( $d = 0.48$ ) for anxiety and depression symptoms.”). See, e.g., Twomey, C., O’Reilly, G. and Byrne, M. Effectiveness of cognitive behavioural therapy for anxiety and depression in primary care: a meta-analysis, *Family Practice*, Volume 32, Issue 1, February 2015, pp. 3–15, <https://doi.org/10.1093/fampra/cmu060>. The political taint is so strong

that some providers reportedly fail to offer and engage in CBT therapy with depressed/anxious gender dysphoric patients for fear of being attacked as engaging in “conversion” therapy. Again, the institutionalization of medical negligence (e.g., confirmation bias) harms vulnerable patients.

44. PROPER INVESTIGATIONS OF DECEPTIVE MISCONDUCT. Ideological overreach can lead to unethical misconduct and licensing violations. Misrepresenting medical-scientific research, deceptively hiding methodological errors, or failing to honestly report ongoing international controversies to courts, patients, or guardians should be properly investigated as misconduct. Licensing boards and professional associations produce and should properly enforce ethics rules and requirements governing the conduct of health care professionals to protect the rights of patients and parents.

45. THE ACTUAL PREVALENCE OF GENDER DYSPHORIA and PATIENTS THAT IDENTIFY AS GENDER DISCORDANT (“transgender”) IS UNKNOWN BUT IT APPEARS TO BE INCREASING AT A RAPIDLY ACCELERATING RATE THUS SUPPORTING AN ALTERNATIVE HYPOTHESIS OF SOCIAL CONTAGION: Estimates reported in in the DSM-V were between 0.005% to 0.014% for adult males and 0.002% to 0.003% for adult females. Thus, gender dysphoria was, until just a few years ago, a very rare condition. It is currently unknown whether these DSM estimates were falsely low due to under-reporting or:

- whether changing societal acceptance of transgendered identity and the growing number of medical centers providing interventions for gender dysphoria has led to increased reporting of persons who identify as transgender ;
- whether the reported educational programs aggressively promoting “non-binary” identification to elementary to high school students to college students have greatly increased the numbers of youth adopting a transgender identity;

- whether the reported wave of “trans You Tube influencers” watched by millions each day as they aggressively “sell” the transgender lifestyle has added to a social contagion effect with vulnerable lonely, depression, anxious, or autistic youth; or
- whether other causal processes are at play.

A key unanswered research question is whether a social contagion process is leading to vast and rapid increases in the numbers of patients identifying as gender discordant (“transgender”). How many of the new waves of thousands of cases are ‘false reports’ that will dissipate with time and normal development over time? For example, the Gender Identity Development Service in the United Kingdom, which treats only children under the age of 18, reported that it received 94 referrals of children in 2009/2010 and 1,986 referrals of children in 2016/2017, a relative increase of 2,000%. See "GIDS referrals figures for 2016/17," Gender Identity Development Service, GIDS. NHS.uk (undated), [http://gids.nhs.uk/sites/default/files/content\\_uploads/referralfigures-2016-17.pdf](http://gids.nhs.uk/sites/default/files/content_uploads/referralfigures-2016-17.pdf).

Reportedly, similar social contagion processes led to tens of thousands of patients and families being harmed by controversial diagnoses such as multiple personality disorder (MPD) and controversial interventions including recovered memory therapy (RMT). RMT and MPD patients, once considered extremely rare (some 300 MPD patients reported worldwide prior to the 1980s-1990s social contagion epidemic) erupted into a flood of tens of thousands of patients and affected families in the 1990s. These very controversial disorders and treatments were greatly reduced by dozens of civil lawsuits against RMT-MPD therapists, international news exposure of scientific evidence debunking these notions, and international news reporting of the civil litigation, licensing prosecutions, and licensing revocations of well-known RMT-

MPD practitioners. (See, e.g., Belluck, P. Memory Therapy Leads to a Lawsuit and Big Settlement [\$10.6 Million], *The New York Times*, Page 1, Column 1, Nov. 6, 1997; Pendergrast, M. (2017). *The repressed memory epidemic: How it happened and what we need to learn from it*. New York, NY: Springer).

Recent data indicates that the number of people seeking care for gender dysphoria is rapidly increasing with some estimates as high as 20-fold and more. See Chen, M., Fuqua, J. & Eugster, E. A. Characteristics of Referrals for Gender Dysphoria Over a 13-Year Period. *Journal of Adolescent Health* 58, 369-371, doi:<https://doi.org/10.1016/j.jadohealth.2015.11.010> (2016); 4. “GIDS referrals figures for 2016/17,” Gender Identity Development Service, GIDS.NHS.uk (undated), [http://gids.nhs.uk/sites/default/files/content\\_uploads/referral-figures-2016-17.pdf](http://gids.nhs.uk/sites/default/files/content_uploads/referral-figures-2016-17.pdf)). See Zucker K. J. (2017). Epidemiology of gender dysphoria and transgender identity. *Sexual health*, 14(5), 404–411. <https://doi.org/10.1071/SH17067>. Data from England show *increases of 4,000%* for female to male patients and in America data show *increases of 20,000%* for young women (e.g. from .01 to 2%). Estimates vary considerably in relation to how sex-gender identity discordance is defined. See Zhang, Q., Goodman, M., Adams, N., Corneil, T., Hashemi, L., Kreukels, B., Motmans, J., Snyder, R., & Coleman, E. (2020). Epidemiological considerations in transgender health: A systematic review with focus on higher quality data. *International journal of transgender health*, 21(2), 125–137. <https://doi.org/10.1080>; Poteat, T., Rachlin, K., Lare, S., Janssen, A. & Devor, A. in *Transgender Medicine: A Multidisciplinary Approach* (eds Leonid Poretsky & Wylie C. Hembree) 1-24 (Springer International Publishing, 2019); Flores AR, Herman JL, Gates, GJ, Brown TNT. How Many Adults Identify as Transgender in the United States? Los Angeles, CA: The Williams Institute; 2016. <https://williamsinstitute.law.ucla.edu/wp-content/uploads/Trans-Adults-US-Aug-2016.pdf>. Accessed April 28, 2021.

46. EVIDENCE SUPPORTS THE HYPOTHESIS THAT GENDER IDENTITY IS *NOT* GENETICALLY OR BIOLOGICALLY DETERMINED: There is strong disconfirming evidence (e.g., Popperian falsifiability) against the theory that gender identity is determined at or before birth and is unchangeable. This comes from A) identical twin studies where siblings share genetic complements and prenatal environmental exposure but have differing gender identities. See Heylens, G. et al. Gender identity disorder in twins: a review of the case report literature. *J Sex Med* 9, 751-757, doi:10.1111/j.1743-6109.2011.02567.x (2012) and B) the very recent and massive increase in the numbers of GD patients over a very short time span. This argues against a biological-genetic hypothesis. See Leinung MC, Joseph J. Changing Demographics in Transgender Individuals Seeking Hormonal Therapy: Are Trans Women More Common Than Trans Men? *Transgend Health*. 2020 Dec 11;5(4):241-245. doi: 10.1089/trgh.2019.0070. PMID: 33644314; PMCID: PMC7906237.

47. REPLICATED RESEARCH EVIDENCE SUPPORTS THE HYPOTHESIS THAT GENDER IDENTITY IS *NOT* IMMUTABLE: Further evidence that gender identity is not fixed and immutable comes from established peer reviewed literature demonstrating that the vast majority (80-95%) of children who express gender dysphoria revert to a gender identity concordant with their biological sex by late adolescence. This natural developmental “cure” of gender dysphoria requires no direct “treatment” and prevents the hormonal and surgical destruction of normal, healthy organs and bodily processes (e.g. prevents sterilization of the child). See Singh D, Bradley SJ, Zucker KJ. A Follow-Up Study of Boys With Gender Identity Disorder. *Front Psychiatry*. 2021 Mar 29;12:632784. doi: 10.3389/fpsyt.2021.632784. PMID: 33854450; PMCID: PMC8039393. It is not currently known whether individuals with gender dysphoria persistence have differing etiologies or severity of precipitating factors compared to desisting individuals.

See Drummond, K. D., Bradley, S. J., Peterson-Badali, M. & Zucker, K. J. A follow-up study of girls with gender identity disorder. *Dev Psychol* **44**, 34-45, doi:10.1037/0012-1649.44.1.34 (2008); Steensma, T. D., McGuire, J. K., Kreukels, B. P., Beekman, A. J. & Cohen-Kettenis, P. T. Factors associated with desistence and persistence of childhood gender dysphoria: a quantitative follow-up study. *J Am Acad Child Adolesc Psychiatry* **52**, 582-590, doi:10.1016/j.jaac.2013.03.016 (2013).

48. VIRTUALLY ALL TRANSGENDER PATIENTS ARE BORN WITH HEALTHY NORMAL SEX ORGANS AND NO KNOWN BRAIN OR GENETIC ABNORMALITIES: Most people with gender dysphoria, do not have a disorder of sexual development. As documented in their medical record, such patients typically have normally formed sexual organs. The presence of normal, functional sex organs prior to the initiation of hormone administration or surgical “transition” operations is typical in transgender patients. I note that both hormonal treatments and surgery to remove healthy, normal organs (the genitals of GD patients) destroy the function of healthy organs (e.g., producing the life-long sterilization of GD patients). Such injurious “treatments” are very controversial and occur nowhere else in medicine that I am aware of with the exception of requests for the amputation of healthy limbs in patients suffering from the very controversial “body integrity identity disorder”. See Elliott, T., Body Dysmorphic Disorder, Radical Surgery and the Limits of Consent, *Medical Law Review*, Volume 17, Issue 2, Summer 2009, Pages 149–182, <https://doi.org/10.1093/medlaw/fwp001>. In 2000 there was a media furor when it was disclosed that a Scottish surgeon had operated upon two adult male patients reportedly suffering from a rare form of a psychological condition known as body integrity identity disorder, in each case amputating a healthy leg. Since then, the question of whether such surgery is ethically or legally permissible has been a matter of debate. The subject raises issues

as to the extent to which it is proper to treat adults with psychiatric or psychological disorders with radical surgery, particularly where the appropriate diagnosis and treatment of the underlying disorder is uncertain or disputed. Similarly, gender transition interventions also involve treating patients “with psychiatric or psychological disorders with radical surgery, where the appropriate diagnosis and treatment of the underlying disorder is uncertain or disputed.”

The primary use of psychotherapy as a means to treat body dysmorphic disorder contrasts with the approaches used by the gender transition industry. See Hadley, S. J., Greenberg, J., & Hollander, E. (2002). Diagnosis and treatment of body dysmorphic disorder in adolescents. *Current psychiatry reports*, 4(2), 108–113. <https://doi.org/10.1007/s11920-002-0043-4>; Allen, A., & Hollander, E. (2000). Body dysmorphic disorder. *The Psychiatric clinics of North America*, 23(3), 617–628. [https://doi.org/10.1016/s0193-953x\(05\)70184-2](https://doi.org/10.1016/s0193-953x(05)70184-2).

49. THE ETIOLOGY (CAUSE) OF GENDER DYSPHORIA IS CURRENTLY UNKNOWN and the “TREATMENTS” are of UNCERTAIN EFFICACY. The current theories and treatments remain experimental and controversial. The etiology of gender dysphoria in individuals with sex-gender identity discordance remains unknown. Alternative hypotheses include some as yet unidentified biological cause, prenatal hormone exposure, genetic variation, postnatal environmental influences, family dynamics, other forms of mental illness, an abnormal detour from developmental identity processes, social contagion effects on suggestible-vulnerable subjects, or a combination of multiple factors. Based upon the available evidence, it is most likely that sex-gender identity discordance is multifactorial with both genetic and environmental influences, differing in both kind and degree in any affected individual. Importantly, these potential contributing factors are hypothesized to be contributory, but not determinative of the condition.



See Saleem, Fatima, and Syed W. Rizvi. "Transgender Associations and Possible Etiology: A Literature Review." *Cureus* 9, no. 12 (2017): e1984.

50. THE CONCEPT OF "NEUROLOGICAL SEX" IS EXPERIMENTAL, UNVERIFIED, HAS NO KNOWN ERROR RATE and is NOT ACCEPTED BY THE RELEVANT SCIENTIFIC COMMUNITY. The recently coined concept of "neurological sex" as a distinct entity or a basis for classifying individuals as male or female has no scientific justification. Limited emerging data has suggested structural and functional differences between brains from normal and transgender individuals. These data do not establish whether these differences are innate and fixed or acquired and malleable. The remarkable neuronal plasticity of the brain is well known, well documented, and has been studied extensively in gender-independent contexts related to health and disease, learning, and behavior. See Fatima Yousif Ismail, Ali Fatemi, and Michael V. Johnston, "Cerebral Plasticity: Windows of Opportunity in the Developing Brain," *European Journal of Paediatric Neurology* 21, no. 1 (2017).

51. GENDER IDENTITY IDEOLOGY IS A POLITICAL, NOT SCIENTIFIC THEORY. A key alternative investigative hypothesis in efforts to understand the rise of reports of gender discordance and social-political-medical attempts to create a transgender movement is that such ideas are not based upon sound scientific biological, genetic, or related principles and data but rather are based upon ideology and driven by political advocacy. Although worldviews among scientists and physicians differ widely (similar to society at large), science must remain firmly grounded in testable, valid, and reliable assessments of physical reality—not ideologically tainted perceptions and belief systems. The inherent link between human sexual biology and teleology (e.g. human reproduction) is self-evident and fixed. Breithaupt H. The science of sex.

*EMBO Rep.* 2012;13(5):394. Published 2012 May 1. doi:10.1038/embor.2012.45. Activists often support clearly contradictory theories and arguments at the same time (e.g. the claim that Gender Dysphoria (GD) and “trans identity” are “immutable”, “genetic”, or based on “brain structures” while simultaneously claiming GD is also “fluid” and thus capable of changing on a daily basis). That is perhaps because the gender transition industry gains support from controversial ideological foundations. (See, e.g., Pluckrose, and Lindsay, J., *Cynical Theories: How Activist Scholarship Made Everything about Race, Gender, and Identity—and Why This Harms Everybody*, Pitchstone Publishing, August 25, 2020).

52. GENDER IDENTITY IDEOLOGY HAS NO SCIENTIFIC BASIS, HAS NEVER BEEN ACCEPTED BY THE RELEVANT SCIENTIFIC COMMUNITY, and HAS NO KNOWN NOR PUBLISHED ERROR RATE. The political-ideological claims of proponents of transgenderism, which include opinions such as “gender identity is the primary factor determining a person’s sex,” “gender is the only true determinant of sex,” and individuals have “sex assigned at birth” must be viewed in their proper ideological context. There is no scientific basis for redefining sex on the basis of a person’s subjective, psychological sense of “gender”.

53. IN CONTRAST TO “TRANSGENDER” IDEOLOGY, THE BIOLOGICAL BASIS OF SEX IS FIRMLY GROUNDED IN SCIENCE, ACCEPTED BY THE RELEVANT SCIENTIFIC COMMUNITY, AND HAS A VERY LOW ERROR RATE: The prevailing, constant, tested, proven, and accurate designation of sex as a biological trait grounded in the inherent purpose of male and female anatomy and as manifested in the appearance of external genitalia at birth remains the proper scientific and medical standard. Redefinition of the classification and meaning of sex based upon pathologic variation is not established medical fact. See, e.g.,

Mittwoch, U. (2013), Sex determination. EMBO reports, 14: 588-592.

<https://doi.org/10.1038/embor.2013.84>

54. THE ETHICAL FOUNDATIONS of MEDICINE—FIRST DO NO HARM: The fundamental purpose of the practice of medicine is to treat disease and alleviate suffering. An essential tenet of medical practice is to avoid doing harm in the process. Efforts to rely upon clear, valid, reliable, and definitive evidence on how to best accomplish treatment goals is the essential ethical, professional, scientific, and clinical goals of physicians. The gender transition industry violates this essential principle by using experimental treatments on vulnerable populations without properly informing them of the actual risks and limitations of the treatments. See Jonson AR, Siegler M, Winslade, WJ: Clinical Ethics, New York: McGraw Hill, 1998.

55. THE ETHICAL FOUNDATIONS of MEDICINE REQUIRE US TO STRIVE TO HELP THOSE IN DISTRESS WITH COMPASSION, KINDNESS, and EMPATHY WITHOUT VIOLATING PATIENTS' and PARENTS' RIGHTS BY ENGAGING IN EXPERIMENTAL, UNPROVEN INTERVENTIONS LEADING TO PERMANENT DAMAGE TO MANY PATIENTS—INCLUDING STERILIZATION: Persons with gender dysphoria as defined in the DSM-V report experiencing significant psychological distress related to their condition with elevated risk of depression, suicide, and other morbidities. Thus, attempts to provide effective medical care to affected persons are clearly warranted. Efforts to effectively treat persons with gender dysphoria require respect for the inherent dignity of those affected, sensitivity to their suffering, and maintenance of objectivity in assessing etiologies and long-term outcomes. In my opinion, the use of unproven, experimental treatments on vulnerable patients and the publication of grossly methodologically defective research are violations of the ethical foundations of medicine.

56. THREE CURRENT APPROACHES FOR MANAGING GENDER DYSPHORIA:

To date, three approaches have been proposed for treating children with gender dysphoria. See Zucker, K. J. On the “natural history” of gender identity disorder in children. *J Am Acad Child Adolesc Psychiatry* 47, 1361-1363, doi:10.1097/CHI.0b013e31818960cf (2008).) The first approach, often referred to as “conversion” or “reparative therapy,” is directed toward actively supporting and encouraging children to identify with their biological sex. The second “neutral” or “watchful waiting” approach, motivated by understanding of the natural history of transgender identification in children, is to neither encourage nor discourage transgender identification, recognizing that the vast majority of affected children if left alone are likely to eventually realign their reports of gender identification with their sex. This approach may also include the use of scientifically validated treatments (e.g. CBT) for the patient’s anxiety, depression, social skills deficits or other issues. See van Bentum, J. S., van Bronswijk, S. C., Sijbrandij, M., Lemmens, L., Peeters, F., Drukker, M., & Huibers, M. (2021). Cognitive therapy and interpersonal psychotherapy reduce suicidal ideation independent from their effect on depression. *Depression and anxiety*, 10.1002/da.23151. Advance online publication. <https://doi.org/10.1002/da.23151>; Gallagher, M. W., Phillips, C. A., D'Souza, J., Richardson, A., Long, L. J., Boswell, J. F., Farchione, T. J., & Barlow, D. H. (2020). Trajectories of change in well-being during cognitive behavioral therapies for anxiety disorders: Quantifying the impact and covariation with improvements in anxiety. *Psychotherapy (Chicago, Ill.)*, 57(3), 379–390. <https://doi.org/10.1037/pst0000283>. The third, “affirming,” approach is to actively encourage children to embrace transgender identity with social transitioning followed by hormonal therapy leading to potential surgical interventions and life-long sterilization. See Walch A, Davidge-Pitts C, Safer JD, Lopez X, Tangpricha V, Iwamoto SJ. Proper Care of Transgender and Gender Diverse Persons in the Setting of Proposed

Discrimination: A Policy Perspective J Clin Endocrinol Metab. 2021;106(2):305-308.

doi:10.1210/clinem/dgaa816.

57. THE “WATCHFUL WAITING” TREATMENT MODALITY INVOLVES NO MEDICAL INTERVENTION AND IS CURRENTLY THE BEST SCIENTIFICALLY SUPPORTED INTERVENTION FOR YOUNG CHILDREN REPORTING GENDER

DYSPHORIA: Desistance (i.e. realignment of expressed gender identity to be concordant with sex) provides the greatest lifelong benefit, is the outcome in the vast majority of patients, and should be maintained as a desired goal. Any scientifically untested intervention that unnecessarily interferes with the likelihood of a normal, non-traumatic, developmental resolution of gender dysphoria is unwarranted and potentially harmful. The gender affirming approach, which includes use of a child’s preferred pronouns, use of sex-segregated bathrooms, other intimate facilities and sleeping accommodations corresponding to a child’s gender identity, has limited, “very weak,” “sparse” scientific support for short-term alleviation of dysphoria and *no long-term outcomes data demonstrating superiority over the other approaches*. (See national reviews of England, Sweden, Finland, the Cochrane review, the Griffin review, the Carmichael review and others). Claims that the other approaches have been scientifically disproven are simply false. Decades of peer-reviewed, published scientific research, including the pioneering work of Dr. Kenneth Zucker, have supported the efficacy of the “watchful waiting” approach for the majority of patients experiencing gender dysphoria. See Zucker, K. J. On the “natural history” of gender identity disorder in children. J Am Acad Child Adolesc Psychiatry 47, 1361-1363, doi:10.1097/CHI.0b013e31818960cf (2008); Bradley, S. J. & Zucker, K. J. Gender Identity Disorder: A Review of the Past 10 YearsG. Journal of the American Academy of Child & Adolescent Psychiatry 36, 872-880, doi:10.1097/00004583-199707000-00008.). In sum, the treatment

protocols and recommendations of politically influenced, non-science associations (WPATH, Pediatrics Assn, APA ) who engaged in “voting”, consensus-seeking methodologies (not science) are not accepted by the relevant *scientific* community, are not based upon competent-credible, methodologically sound science, and have no known, nor published, error rate.

58. THE HARMFUL EFFECTS OF “AFFIRMATIVE” TREATMENTS—INCLUDING PUBERTAL SUPPRESSION—ARE ESTABLISHED and ACCEPTED BY THE RELEVANT SCIENTIFIC COMMUNITY: “To sum up how puberty suppression works, a thought experiment might be helpful. Imagine two pairs of biologically and psychologically normal identical twins—a pair of boys and a pair of girls—where one child from each pair undergoes puberty suppression and the other twin does not. Doctors begin administering GnRH analogue treatments for the girl at, say, age 8, and for the boy at age 9. Stopping the gonadal hormone pathway of puberty does not stop time, so the puberty-suppressed twins will continue to age and grow—and because adrenal hormones associated with puberty will not be affected, the twins receiving GnRH analogue will even undergo some of the changes associated with puberty, such as the growth of pubic hair. However, there will be major, obvious differences within each set of twins. *The hormone suppressed twins' reproductive organs will not mature:* the testicles and penis of the boy undergoing puberty suppression will not mature, and the girl undergoing puberty suppression will not menstruate. The boy undergoing puberty suppression will have less muscle mass and narrower shoulders than his twin, while the breasts of the girl undergoing puberty suppression will not develop. The boy and girl undergoing puberty suppression will not have the same adolescent growth spurts as their twins. *So all told, by the time the untreated twins reach maturity, look like adults, and are biologically capable of having children, the twins undergoing puberty suppression will be several inches shorter, will physically look more androgynous and*

*childlike, and will not be biologically capable of having children.* This is a thought experiment, but it illustrates some of the effects that puberty suppression would be expected to have on the development of a growing adolescent's body.” See Hruz, PW, Mayer, LS, and McHugh, PR, "Growing Pains: Problems with Puberty Suppression in Treating Gender Dysphoria," The New Atlantis, Number 52, Spring 2017 pp. 3-36.

59. THE ENDOCRINE SOCIETY RECOGNIZES THAT THE QUALITY OF EVIDENCE FOR “AFFIRMATIVE” TREATMENTS IS CURRENTLY “*LOW OR VERY LOW*” (“*estimate of effect is very uncertain*”). There is no general acceptance of these treatments in the relevant scientific community. The error rate is unknown and could be very high. The Endocrine Society published 2009 clinical guidelines for the treatment of patients with persistent gender dysphoria. See Hembree, W. C. et al. Endocrine treatment of transsexual persons: an Endocrine Society clinical practice guideline. J Clin Endocrinol Metab 94, 3132-3154, doi:10.1210/jc.2009-0345 (2009). The recommendations include temporary suppression of pubertal development of children with GnRH agonists (hormone blockers normally used for children experiencing precocious puberty) followed by hormonal treatments to induce the development of secondary sexual traits consistent with one’s gender identity. In developing these guidelines, the authors assessed the quality of evidence supporting the recommendations made with use of the GRADE (Recommendations, Assessment, Development, and Evaluation) system for rating clinical guidelines. As directly stated in the Endocrine Society publication, “*the strength of recommendations and the quality of evidence was low or very low.*” According to the GRADE system, low recommendations indicate that “[f]urther research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.” Very low recommendations mean that “any estimate of effect is very uncertain.” (See

Guyatt G H, Oxman A D, Vist G E, Kunz R, Falck-Ytter Y, Alonso-Coello P et al. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations BMJ 2008; 336 :924 doi:10.1136/bmj.39489.470347.AD). An updated set of guidelines was published in September of 2017. See Hembree, W. C. et al. Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline. J Clin Endocrinol Metab, doi:10.1210/jc.2017-01658 (2017). The low quality of evidence presented in this document persists to the current day, as the controversy over these “treatments” is accelerating in recent years.

60. THE WPATH GUIDELINES (7th version) NOTE SERIOUS LIMITATIONS OF THE EXISTING SCIENTIFIC DATA: Clinical Practice Guidelines published by the World Professional Association for Transgender Health (WPATH) - (an advocacy organization whose positions are based on voting and not a scientific, evidence-based process) which is currently in its 7<sup>th</sup> iteration, similarly, though less explicitly, acknowledge the limitation of existing scientific data supporting their recommendations given and “the value of harm-reduction approaches”.

Coleman, E., Bockting, W., Botzer, M., Cohen-Kettenis, P., DeCuypere, G., Feldman, J., Fraser, L., Green, J., Knudson, G., Meyer, W. J., Monstrey, S., Adler, R. K., Brown, G. R., Devor, A. H., Ehrbar, R., Ettner, R., Eyler, E., Garofalo, R., Karasic, D. H., . . . Zucker, K. (2012). Standards of care for the health of transsexual, transgender, and gender-nonconforming people, version 7. International Journal of Transgenderism, 13(4), 165–232.

<https://doi.org/10.1080/15532739.2011.700873>.

61. ADMINISTERING HORMONES TO A CHILD WHOSE GENDER DYSPHORIA IS HIGHLY LIKELY (80%+) TO RESOLVE IS RISKY, UNSCIENTIFIC and UNETHICAL. Iatrogenic damages, including life-long sterility, stunted growth, increased heart attack risk, etc.,



are often irreversible. Treatment of gender dysphoric children who experience persistence of symptoms with hormones (pubertal suppression and cross-hormone therapy) carries significant risk. It is generally accepted, even by advocates of transgender hormone therapy, that hormonal treatment impairs fertility and often result in sterility, which in many cases is irreversible. See Nahata, L., Tishelman, A. C., Caltabellotta, N. M. & Quinn, G. P. Low Fertility Preservation Utilization Among Transgender Youth. *Journal of Adolescent Health* 61, 40-44, doi:<https://doi.org/10.1016/j.jadohealth.2016.12.012> (2017)). Emerging data also show that treated patients have lower bone density which may lead to increased fracture risk later in life. See Klink, D., Caris, M., Heijboer, A., van Trotsenburg, M. & Rotteveel, J. Bone Mass in Young Adulthood Following Gonadotropin-Releasing Hormone Analog Treatment and Cross-Sex Hormone Treatment in Adolescents With Gender Dysphoria. *The Journal of Clinical Endocrinology & Metabolism* 100, E270-E275, doi:10.1210/jc.2014-2439 (2015)). Other potential adverse effects include disfiguring acne, high blood pressure, weight gain, abnormal glucose tolerance, breast cancer, liver disease, thrombosis, and cardiovascular disease. See Seal, L. J. A review of the physical and metabolic effects of cross-sex hormonal therapy in the treatment of gender dysphoria. *Annals of Clinical Biochemistry* 53, 10-20, doi:10.1177/0004563215587763 (2016); Banks, K., Kyinn, M., Leemaqz, S. Y., Sarkodie, E., Goldstein, D., & Irwig, M. S. (2021). See also, Blood Pressure Effects of Gender-Affirming Hormone Therapy in Transgender and Gender-Diverse Adults. *Hypertension (Dallas, Tex.: 1979)*, HYPERTENSIONAHA12016839. Advance online publication. <https://doi.org/10.1161/HYPERTENSIONAHA.120.16839>; Getahun, D., Nash, R., Flanders, W. D., Baird, T. C., Becerra-Culqui, T. A., Cromwell, L., Hunkeler, E., Lash, T. L., Millman, A., Quinn, V. P., Robinson, B., Roblin, D., Silverberg, M. J., Safer, J., Slovis, J., Tangpricha, V., & Goodman, M. (2018). Cross-sex Hormones and Acute Cardiovascular

Events in Transgender Persons: A Cohort Study. *Annals of internal medicine*, 169(4), 205–213. <https://doi.org/10.7326/M17-2785>; Spyridoula Maraka, Naykky Singh Ospina, Rene Rodriguez-Gutierrez, Caroline J Davidge-Pitts, Todd B Nippoldt, Larry J Prokop, M Hassan Murad, Sex Steroids and Cardiovascular Outcomes in Transgender Individuals: A Systematic Review and Meta-Analysis, *The Journal of Clinical Endocrinology & Metabolism*, Volume 102, Issue 11, 1 November 2017, Pages 3914–3923, <https://doi.org/10.1210/jc.2017-01643>.

62. LONG TERM EFFECTS ARE UNKNOWN. Such treatments are not generally accepted by the relevant scientific community and have no known nor published error rate. Since strategies for the treatment of transgender children as summarized by the Endocrine Society guidelines are relatively new, long-term outcomes are unknown. Evidence presented as support for short-term reductions in psychological distress following social transition in a “gender affirming” environment remains inconclusive. When considered apart from advocacy-based agendas, multiple potential confounders are evident. The most notable deficiencies of existing research are the absence of proper control subjects and lack of randomization in study design. See Hruz, P. W. Deficiencies in Scientific Evidence for Medical Management of Gender Dysphoria. *Linacre Q* 87, 34-42, doi:10.1177/0024363919873762 (2020). Although appropriate caution is warranted in extrapolating the outcomes observed from prior studies with current treatments, adults who have undergone social transition with or without surgical modification of external genitalia continue to have *rates of depression, anxiety, substance abuse and suicide far above the background population*. See Adams, N., Hitomi, M. & Moody, C. Varied Reports of Adult Transgender Suicidality: Synthesizing and Describing the Peer-Reviewed and Gray Literature. *Transgend Health* 2, 60-75, doi:10.1089/trgh.2016.0036 (2017); see also Dhejne, C. et al. Long-

term follow-up of transsexual persons undergoing sex reassignment surgery: cohort study in Sweden. PLoS One 6, e16885, doi:10.1371/journal.pone.0016885 (2011)).

63. MEDICAL TREATMENTS CONTRARY TO THE SCIENCE COULD RESULT IN IRREVERSIBLE HARMS TO MANY PATIENTS WHO WOULD OTHERWISE HAVE RECOVERED NATURALLY FROM GENDER DYSPHORIA: Of particular concern is the likelihood that naively requested gender transition “treatments” and social changes could interfere with known very high rates of natural-untreated resolution of sex-gender discordance. Any activity that encourages or perpetuates transgender persistence for those who would otherwise desist could cause significant harm, particularly in light of the current treatment paradigm for persisting individuals. As noted, sterility can often be expected with hormonal or surgical disruption of normal gonadal function. See Cheng PJ, Pastuszak AW, Myers JB, Goodwin IA, Hotaling JM. Fertility concerns of the transgender patient. Transl Androl Urol. 2019 Jun;8(3):209-218. doi: 10.21037/tau.2019.05.09. PMID: 31380227; PMCID: PMC6626312.

64. YOUNG CHILDREN and PARENTS ARE OFTEN NOT PROPERLY INFORMED or ARE NOT COMPETENT TO GIVE INFORMED CONSENT TO PROCEED WITH EXPERIMENTAL, HAZARDOUS TREATMENTS THAT COULD POTENTIALLY RESULT IN PERMANENT STERILITY: This is a particularly concerning issue given that children are likely to be incapable of giving truly informed consent. See Geier, C. F. Adolescent cognitive control and reward processing: Implications for risk taking and substance use. Hormones and Behavior 64, 333-342, doi:https://doi.org/10.1016/j.yhbeh.2013.02.008 (2013). This concern remains valid when applied to hormonal or surgical treatments that will result in lifelong sterility. In addition, parents are often manipulated and coerced by misinformed political activists or providers who threaten them with dire warnings that the only two options are “treatment or suicide”.

These “threats” ignore data that challenge this biased assumption. See D’Angelo, R., Syrulnik, E., Ayad, S. *et al.* One Size Does Not Fit All: In Support of Psychotherapy for Gender Dysphoria. *Arch Sex Behav* 50, 7–16 (2021). <https://doi.org/10.1007/s10508-020-01844-2>

65. SOCIAL CONTAGION HAS BEEN IMPROPERLY IGNORED BY PROVIDERS: Social and psychological support with dignity for adolescents with gender dysphoria does not necessitate acceptance of a unproven, experimental understanding of human sexuality. Rather, policy requirements including social contagion promoting educational processes that can increase the prevalence and persistence of transgender identification have significant potential for inducing long-term harm to affected children.

66. COMPETENT, METHODOLOGICALLY SOUND, LONG-TERM TREATMENT OUTCOME RESEARCH ON GENDER DYSPHORIA INTERVENTIONS HAS NEVER BEEN DONE: There remains a significant and unmet need to improve our understanding of the biological, psychological, and environmental basis for the manifestation of patient reports of discordance of gender identity and biological sex in affected individuals. (Olson-Kennedy, J. *et al.* Research priorities for gender nonconforming/transgender youth: gender identity development and biopsychosocial outcomes. *Current Opinion in Endocrinology, Diabetes and Obesity* 23, 172-179, (2016)). In particular, there is a concerning lack of randomized controlled trials comparing outcomes of youth with gender dysphoria who are provided public encouragement for “affirming” social gender transition and how such transitioning affects the usual and natural progression to resolution of gender dysphoria in most affected children. Such studies can be ethically designed and executed with provisions for other dignity affirming measures to both treatment groups. See Sugarman J. Ethics in the design and conduct of clinical trials. *Epidemiol Rev.*

2002;24(1):54-8. doi: 10.1093/epirev/24.1.54. PMID: 12119856; And <https://clinicalcenter.nih.gov/recruit/ethics.html>

67. DUE TO THE LACK OF QUALITY, CREDIBLE SUPPORTIVE RESEARCH GENDER AFFIRMING INTERVENTIONS REMAIN EXPERIMENTAL and HIGHLY CONTROVERSIAL. Gender identity is consolidated during puberty and adolescence as young people's bodies become more sexually differentiated and mature. How this normally happens is not well understood, so it is imperative to be cautious about interfering with this complex natural process. Far from being cautious and prudent in using puberty blockers to treat gender dysphoria, too many providers engaged in gender affirming medical interventions are conducting an unethical and risky experiment that does not come close to the ethical standards demanded in other areas of medicine. No one really knows all the potential consequences of puberty blocking as a treatment for gender dysphoria, but there are some known effects of pubertal suppression on children who are physiologically normal, and these carry long-term health risks. Children placed on puberty blockers have slower rates of growth in height, and an elevated risk of low bone-mineral density. Another possible effect of blocking normally timed puberty is alteration of normal adolescent brain maturation. (See Arain, M., Haque, M., Johal, L., Mathur, P., Nel, W., Rais, A., Sandhu, R., & Sharma, S. (2013). Maturation of the adolescent brain. *Neuropsychiatric disease and treatment*, 9, 449–461. <https://doi.org/10.2147/NDT.S39776>).

When followed by cross-sex hormones, known and potential effects include disfiguring acne, high blood pressure, weight gain, abnormal glucose tolerance, breast cancer, liver disease, thrombosis, and cardiovascular disease. Tragically, those children who persist in their transgender identity and take puberty blockers and cross-sex hormones are *expected to become sterile*. Given what we already know about puberty blocking and how much remains unknown, it

is not surprising that the use of GnRH analogues for puberty suppression in children with gender dysphoria is not FDA-approved. The off-label prescription of these drugs is legal *but unethical* outside the setting of a carefully controlled and supervised clinical trial. See Hruz, Mayer, and McHugh, “Growing Pains.” Trans activist professionals act as if there is a firm scientific consensus that it is safe and effective to treat gender dysphoria by using GnRH analogues to suppress normal puberty indefinitely. But this is far from the reality, as I, together with Mayer and McHugh, have pointed out: “Whether puberty suppression is safe and effective when used for gender dysphoria remains unclear and unsupported by rigorous scientific evidence.” Thus, it is not generally accepted by the relevant scientific community. Instead of regarding puberty blocking as a “prudent and scientifically proven treatment option,” courts of law, parents, and the medical community *should view it as a “drastic and experimental measure.”* (See Hruz, Mayer, and McHugh, 2017.) The use of any experimental medical treatment on children calls for “especially intense scrutiny, since children cannot provide proper legal consent to experimental medical treatments—especially treatments that may harm natural gender processes and produce sterility.

The rapid acceptance of puberty suppression as a treatment for gender dysphoria with little scientific support or scrutiny should raise concerns about the welfare of the children who receive such treatments. In particular, we should question the claim that it is both physiologically and psychologically “reversible.” This includes the alteration of a temporally dependent developmental process. After an extended period of pubertal suppression one cannot “turn back the clock” and reverse changes in the normal coordinated pattern of adolescent psychological development and puberty. (See Hruz, Mayer, and McHugh, “Growing Pains, The New Atlantis: A Journal of Technology and Society, Spring 2017, pg 3-36; see also Vijayakumar N, Op de Macks

Z, Shirtcliff EA, Pfeifer JH. Puberty and the human brain: Insights into adolescent development. *Neurosci Biobehav Rev.* 2018 Sep;92:417-436. doi: 10.1016/j.neubiorev.2018.06.004. Epub 2018 Jul 1. PMID: 29972766; PMCID: PMC6234123; see also Choudhury S, Culturing the adolescent brain: what can neuroscience learn from anthropology?, *Social Cognitive and Affective Neuroscience*, Volume 5, Issue 2-3, June/September 2010, Pages 159–167, <https://doi.org/10.1093/scan/nsp030>

68. ACTIVIST ATTEMPTS TO CONTROL PUBLIC DISCUSSION ARE HARMFUL TO SCIENCE: The controversies regarding the risks and potential dangers of the transgender industry cannot be resolved by “cancel culture.” As Steven Levine, MD of Case Western has noted, “Among psychiatrists and psychotherapists who practice in the area, *there are currently widely varying views* concerning both the causes of, and appropriate therapeutic responses to, gender dysphoria in children. Dr. Levine went on to state, “Existing studies do not provide a basis for a scientific conclusion as to which therapeutic response results in the best long-term outcomes for affected individuals.” Although political advocates have asserted that the “affirmation therapy” model is accepted and agreed with by the overwhelming majority of mental health professionals, many respected academics and providers in the field strongly disagree. For example, J. Cantor, Ph.D. (McGill) published the following opinion in 2019, “almost all clinics and professional associations in the world” do not use “gender affirmation” for prepubescent children and instead “delay any transitions until after the onset of puberty.” See J. Cantor (2019), Transgender and Gender Diverse Children and Adolescents: Fact-Checking of AAP Policy, *J. of Sex & Marital Therapy*, 1, DOI: 10.1080.0092623X.2019.1698481.

69. In the midst of this ongoing international, raging controversy, transgender and allied political activists have attempted to silence open public debate on the risks and benefits of

transgender medical procedures and political ideologies. For example, Ryan Anderson, Ph.D., a policy analyst, wrote a book analyzing the scientific and policy issues involved in assessing the risks and benefits of the current practices of the transgender treatment industry. See Anderson, R., *When Harry Became Sally: Responding to the Transgender Moment*, Encounter Books. Despite widespread scientific interest and positive reviews, the book was banned from sale by the Amazon Corporation. Too many lives are at stake for such blatant suppression of open scientific discussion. Several positive reviews of Dr Ryan's book were posted by notable members of the relevant scientific-ethical community including: Paul McHugh, MD, University Distinguished Professor of Psychiatry, Johns Hopkins University School of Medicine (Dr McHugh was trained at Harvard College and Harvard Medical School. He served as the Chairman of Psychiatry at Johns Hopkins Medical School for decades) and Melissa Moschella, PhD, who served at Columbia University as Director of the Center for Biomedical Ethics in the Department of Medicine and currently at The Catholic University of America. (Dr. Moschella was trained at Harvard College and her PhD is from Princeton University) and Maureen Condic, Associate Professor of Neurobiology and Adjunct Professor of Pediatrics, University of Utah Medical School. (Dr. Condic's training includes a B.A. from the University of Chicago, and a Ph.D. from the University of California, Berkeley) and John Finnis, Ph.D., Professor of Law at Oxford University for 40 years, now Emeritus. (LL.B. from Adelaide University (Australia) and Ph.D. in 1965 from Oxford University as a Rhodes Scholar at University College Oxford.)

International experts from a variety of relevant fields consider the issue of proper and harmful transgender treatments to be a serious controversy that must not be silenced. Other scholars in this contentious field have been threatened and/or silenced by the political and ideo-



logical allies of the gender transition industry. Consider, for example, the case of Alan Josephson, MD, a distinguished psychiatrist. See Kearns, M., Gender Dissenter Gets Fired, National Review, Jan 12, 2019. “Allan M. Josephson is a distinguished psychiatrist who, since 2003, has transformed the division of child and adolescent psychiatry and psychology at the University of Louisville from a struggling department to a nationally acclaimed program. In the fall of 2017 he appeared on a panel at the Heritage Foundation and shared his professional opinion on the medicalization of gender-confused youth. The university responded by demoting him and then effectively firing him.” See <https://www.nationalreview.com/2019/07/allen-josephson-gender-dissenter-gets-fired/>. Theories in the midst of an international firestorm of controversy are clearly not “generally accepted” by the relevant scientific community. The ongoing attempts to ban books and aggressively silence academic debate or “cancel” professionals with alternative views are clear demonstrations of the ongoing and intense controversies surrounding the gender transition industry.

70. Consider also the example of Dr. Lisa Littman at Brown University Medical School. Dr. Littman conducted extensive surveys to assess the experiences of parents involved in an online community for parents of transgender children or “gender skeptical” parents and children. There were 256 completed surveys. Their children were mostly adolescents or young adults. The parents reported that about 80 percent of their (mostly adolescent) children announced their transgender identity “out of the blue” without the long-term history generally associated with gender dysphoria. The parents also reported that transgender identity was linked with mental health issues (an often repeated, reliable finding in multiple studies from multiple nations). The parents also reported that after their children came out as transgender, their children’s mental health worsened, as did relationships with family members. The parents also reported a *decline*

in the children's social adjustment after the announcement (e.g., more isolation, more distrust of non-transgender information sources, etc.).

The publication of the Littman paper was greeted by the outrage of trans activists who denounced the paper and Dr. Littman, calling it “hate speech and transphobic.” Brown University had initially produced a press release for the paper stating the Littman research provided bold new insights into transgender issues. Once the political attacks began, the University removed it from their announcements. Fortunately, in this case, there was also a counter-outcry from scientists decrying Brown University and the political activists for threatening academic freedom and censoring scientific research that might assist in the treatment of gender dysphoria.

There was also reportedly an academic petition signed by members of the relevant scientific community. For example, Lee Jussim, PhD., Chair of the Psychology Department at Rutgers University wrote, “If the Littman study is wrong, let someone produce evidence that it is wrong. Until that time, if the research p\*sses some people off, who cares? Galileo and Darwin p\*ssed people off too. Brown University should be ashamed of itself for caving to sociopolitical pressure. Science denial, anyone?” Similarly, Richard B. Krueger, MD (a Harvard Medical School graduate) of Columbia University College of Physicians and Surgeons, board certified psychiatrist specializing in the treatment of sexual disorders wrote, “Brown University’s actions in its failure to support Dr. Littman’s peer reviewed research are abhorrent.” Similarly, Nicholas Wolfinger, PhD (UC Berkeley, UCLA), currently Professor of Family and Consumer Studies at the University of Utah wrote: “The well-being of trans youth and other sexual minorities is best served by more research, not less.”

The onslaught of attacks resulted in the journal asking Dr. Littman to publish a “corrected” version of the paper. After careful review, the paper was again published with additional

information but no methodological nor data corrections—as no such errors were found. See <https://www.psychologytoday.com/us/blog/rabble-rouser/201903/rapid-onset-gender-dysphoria>. See also Littman, L., Correction: Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria, PLOS ONE March 19, 2019, <https://doi.org/10.1371/journal.pone.0214157>. Dr. Littman’s paper was a key initial step in the alternative investigative hypothesis that the very recent and enormous increase in teenage girls seeking “gender transitioning” is due to a social contagion process at school, in peer groups, and on the internet. This theory has yet to be tested in detail.

71. UNDERLYING BIOLOGY IS NOT CHANGED BY ALTERING BODILY FEATURES TO “PASS” AS THE OPPOSITE SEX, NOR DO SUCH ALTERATIONS CHANGE DISEASE VULNERABILITIES ASSOCIATED WITH GENETICALLY-DEFINED SEX: Despite the increasing ability of hormones and various surgical procedures to reconfigure some male bodies to visually pass as female, or vice versa, the biology of the person remains as defined by genetic makeup, normatively by his (XY) or her (XX) chromosomes, including cellular, anatomic, and physiologic characteristics and the particular disease vulnerabilities associated with that chromosomally-defined sex. (See “Institute of Medicine (US) Committee on Understanding the Biology of Sex and Gender Differences. Exploring the Biological Contributions to Human Health: Does Sex Matter?” Wizemann TM, Pardue ML, editors. Washington (DC): National Academies Press (US); 2001. PMID: 25057540.) For instance, the XX (genetically female) individual who takes testosterone to stimulate certain male secondary sex characteristics will nevertheless remain unable to produce sperm and father children. Contrary to assertions and hopes that medicine and society can fulfill the aspiration of the individual with sex-discordant

gender identity to become “a complete man” or “a complete woman,” this is not biologically attainable. It is possible for some adolescents and adults to pass unnoticed as the opposite gender that they aspire to be—but with limitations, costs, and risks, as I detail later. See S. Levine (2018), Informed Consent for Transgendered Patients, *J. of Sex & Marital Therapy*, at 6, DOI: 10.1080/0092623X.2018.1518885 (“Informed Consent”); S. Levine (2016), Reflections on the Legal Battles Over Prisoners with Gender Dysphoria, *J. Am. Acad Psychiatry Law* 44, 236 at 238 (“Reflections”).

72. ONE OF THE MOST CONTROVERSIAL AND CONTENTIOUS ISSUES IN TRANSGENDER SCIENCE IS THE RECENT EPIDEMIC OF ADOLESCENT FEMALE TO MALE GENDER DISCORDANT PATIENTS: How prevalent is the Sudden Onset Gender Dysphoria Epidemic in Teen Girls first described by the research of Dr. Littman at Brown University? In the UK, where centralized medical care provides data to track health care phenomenon, the number of adolescent girls seeking sex transitioning exploded *over 4,000% in the last decade*. Similarly, in the US, where we lack the same kinds of centralized health care data, it has been reported that in 2018 2% (2 in 100) of high school students identified on surveys as “transgender”—this is 200 times greater response— a 20,000% increase—over reports during past decades which showed a rate of only .01 percent (one in 10,000 people). See Johns MM, Lowry R, Andrzejewski J, et al. Transgender Identity and Experiences of Violence Victimization, Substance Use, Suicide Risk, and Sexual Risk Behaviors Among High School Students—19 States and Large Urban School Districts, 2017. *MMWR Morb Mortal Wkly Rep* 2019; 68:67–71.

Along with this increase in transgender patients and identifiers, has come *a radical and recent transformation of the patient population* from early onset males to rapid onset adolescent girls. Thus currently the majority of new patients with sex-gender discordance are not males with a long, stable history of gender dysphoria since early childhood—as they were for decades—but instead adolescent females with no documented long-term history of gender dysphoria—thus they experienced “rapid onset” transgender identification. Whole groups of female friends in colleges, high schools, and even middle schools across the country are reportedly coming out together in peer group clusters as “transgender.” These are girls who — by detailed parental reports and self-reports—had never experienced any discomfort in their biological sex until they heard a coming-out story from a speaker at a school assembly or discovered the internet (YouTube) community of trans “influencer video stars.”

This extraordinary change in new patient demographics appears more consistent with a theory of social contagion than of “immutable identification,” “brain structures,” “genetics,” or other biological hypotheses. Many unsuspecting parents, whose children have never shown any signs for gender discordant feelings or ideas, are awakening to find their daughters in thrall to hip trans YouTube stars and “gender-affirming” educators and activist therapists who push life-changing interventions on these young girls—including double mastectomies and hormonal puberty blockers that can potentially cause permanent infertility. See Littman L. Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria. PLoS One. 2018 Aug 16;13(8):e0202330. doi: 10.1371/journal.pone.0202330. Erratum in: PLoS One. 2019 Mar 19;14(3):e0214157. PMID: 30114286; PMCID: PMC6095578.

73. GENERATING, CONSIDERING, AND TESTING ALTERNATIVE THEORIES PREVENTS CONFIRMATION BIAS. Several theories should be considered, as the science is currently unclear:

We should consider the genetics theory of transgender identity. But his theory cannot explain the rapid expansion of new GD cases (a 4,000% to 20,000% increase), as our genome is simply not changing that fast.

We should consider the “brain structures” theory of transgender identity. Yet there is only weak medical evidence to support this theory, and it cannot explain the rapid expansion of new gender dysphoria cases because brain structures are not changing that fast.

We should consider the theory that increased social acceptance of the transgender lifestyle is leading many people who were transgender all along to come out. Yet this theory fails to explain why *males and older women are not also coming out in the same huge numbers* and not coming out in “social peer group clusters,” as adolescent females are reportedly doing.

We should consider the “immutable gender identity” theory. Yet this theory fails to explain the rapid expansion of patients. In addition, the “immutable” theory fails to explain the rapid expansion of “Rapid Onset Gender Dysphoria” reports—newly “trans” adolescent girl patients who reportedly showed no indication of gender dysphoria previously.

Having considered alternative theories—to avoid confirmation bias—it appears that another alternative theory might well be the most applicable, rational theory to explain the extreme, recent increases in the GD patient population: the Social Contagion hypothesis. Social contagion effects are also reportedly responsible for the massive, rapid increase in “recovered repressed memory” cases and also the extraordinary expansion of “multiple personality disorder”

cases in the 1990s. I also note the alternative investigative hypothesis that *social contagion effects would appear to be psychological/psychiatric problems and NOT physical medical problems requiring hormonal or surgical “treatments.”*

74. ADOLESCENT FEMALE PSYCHOLOGY RESEARCH SHOWS WELL-DOCUMENTED PEER INFLUENCES on ANOREXIA, BULIMIA, DRUG ABUSE, and now GENDER DISCORDANT (“TRANSGENDER”) SYMPTOMS. The Social Contagion theory for the large increase in reported Rapid Onset Gender Dysphoria in adolescent girls appears to be the most rational explanation for the reportedly dramatic (rapid, media related, hundreds of times increase, YouTube influenced, Peer Group influenced) explosion of gender discordant patients among adolescent female friend groups.

Adolescent female social contagion effects in psychiatric illness are well-known and well documented. Consider, for example, Bulimia and Anorexia — both of which spread rapidly in adolescent female friend groups. See Allison S, Warin M, Bastiampillai T. Anorexia nervosa and social contagion: clinical implications. Aust N Z J Psychiatry. 2014 Feb;48(2):116-20. doi: 10.1177/0004867413502092. Epub 2013 Aug 22. PMID: 23969627.

It has been known for decades that adolescent females are highly prone to social contagion effects spreading psychiatric symptoms—e.g., Anorexia, Bulimia, Drug Abuse, etc.) are well known to be subject to “cluster” and “friendship” contagions as teens girls (and especially troubled teen girls) co-ruminate and share feelings at very high rates and with emotional depth. See, e.g., Crandall CS. Social contagion of binge eating. J Pers Soc Psychol. 1988 Oct;55(4):588-98. doi: 10.1037//0022-3514.55.4.588. PMID: 3193348.

For example, Prof. Amanda Rose at the University of Missouri has conducted research to understand why adolescent girls show such susceptibility to social contagion with psychiatric symptoms—“Teenage girls share symptoms via social contagions because their friendship processes involve “co-rumination,” that is, taking on the emotional pain and concerns of their friends.” See R. Schwatz-Mette and A. Rose, Co-Rumination Mediates Contagion of Internalizing Symptoms Within Youths’ Friendships, *Developmental Psychology* 48(5):1355-65, February 2012, DOI: 10.1037/a0027484 *Developmental Psychology*, Vol. 48, No. 5, 1355–1365 0012-1649/12/\$12.00 DOI: 10.1037/a0027484. This could be one explanation for why we are hearing increasing reports of “clusters” and “friend groups” of teen girls who are adopting a “transgender identity” and “transitioning” as friends together.

75. IDEOLOGICAL-POLITICAL PRESSURE SEEKS TO INSTITUTIONALIZE THE SYSTEMATIC NEGLIGENCE and METHODOLOGICAL ERROR OF CONFIRMATION BIAS: Because of the efforts of ill-informed legal and medical professionals and the intense activity of political trans activists— health providers (in many fields) are now NOT permitted to openly asks questions, properly investigate alternative diagnoses, or explore alternative hypotheses for the symptoms of gender dysphoria patients. They are compelled (sometimes under fear of employment termination or legal attacks) to adopt a patient’s self-diagnosis and only support “transgender affirming” medical interventions. These providers are thus being pressured and/or compelled to commit the scientific and medical malpractice of Confirmation Bias. (See detailed discussion above on confirmation bias.) Unexamined “affirming” medical interventions—based on uncorroborated patient self-reports, assessed by mental health professionals with no methodology for discerning true from false patient reports, with no ability to decipher accurate from contaminated “memories,” with no alternative treatments offered, and no alternative explanations



(e.g., social contagion) explored—are medical, psychological, surgical, and endocrinological negligence and a violation of the most basic, essential scientific and medical practices and methods requiring the generation and testing of alternative hypotheses. In sum, the industry actually requires “confirmation bias”—one of the most serious of all methodological diagnostic failures. See e.g. Mendel, R. et. al., Confirmation bias: why psychiatrists stick to wrong preliminary diagnoses, *Psychological Medicine*, Oxford University Press, 20 May 2011 (“Diagnostic errors can have tremendous consequences because they can result in a fatal chain of wrong decisions. Experts assume that physicians’ desire to confirm a preliminary diagnosis while failing to seek contradictory evidence is an important reason for wrong diagnoses. This tendency is called ‘confirmation bias.’”); see also, Doherty, T.S. and Carroll, A.E., Believing in Overcoming Cognitive Biases, *American Medical Association Journal of Ethics*, 2020;22(9):E773-778 (“Like all humans, health professionals are subject to cognitive biases that can render diagnoses and treatment decisions vulnerable to error. Learning effective debiasing strategies and cultivating awareness of confirmation, anchoring, and outcomes biases and the affect heuristic, among others, and their effects on clinical decision making should be prioritized in all stages of medical education.... Confirmation bias is the selective gathering and interpretation of evidence consistent with current beliefs and the neglect of evidence that contradicts them.”); see also, Hershberger PJ, Part HM, Markert RJ, Cohen SM, Finger WW. Teaching awareness of cognitive bias in medical decision making. *Acad Med*. 1995;70(8):661.

76. GIVEN THE LACK OF RESEARCH, IT IS RECKLESS TO PERMIT CHILDREN TO SELF-DIAGNOSE WHEN THE “TREATMENTS” WILL PRODUCE LIFE-LONG STERILIZATION and/or OTHER PERMANANT INJURIES TO NORMAL, HEALTHY ORGANS: In some jurisdictions in America now child or adolescent patients can—without parental

permission or even parental notification—receive hormones to begin the experimental treatment of “transitioning” with no competent diagnostic investigation or professional assessment of gender dysphoria and no competent medical investigation, testing, or consideration of alternative hypotheses. Worst of all, providers can be coerced by law, collegial pressures, or “cancel culture” ideology to comply with the troubled child’s/teen’s/patient’s amateur self-diagnosis or be faced with potentially career ending allegations of “conversion therapy.” Politically tainted, pseudo-science, experimental, unproven medical practices have caused grave harm to millions in the past. (See the discussion of lobotomies, repressed memory therapy, multiple personality therapy, rebirthing therapy, etc. above.) Unethical, politically driven, experimental medical errors should not be repeated today.

77. EXPERIMENTATION on SEX-GENDER DISCORDANT PATIENTS IS ESPECIALLY LIKELY TO CAUSE HARM TO MINORITY PATIENTS FROM HISTORICALLY MARGINALIZED COMMUNITIES. The development of effective strategies to impact long-term physical and psychological health in patients who experience sex-discordant gender identity should be undertaken with recognition of the disproportionate burden of this condition in a number of vulnerable minority populations of children. These include:

- children with a prior history of psychiatric illness (See, e.g., Kaltiala-Heino, R., Sumia, M., Työläjäarvi, M., & Lindberg, N. (2015). Two years of gender identity service for minors: overrepresentation of natal girls with severe problems in adolescent development. *Child and adolescent psychiatry and mental health*, 9, 9. <https://doi.org/10.1186/s13034-015-0042-y>

- children of color (See, e.g., G. Rider et al. (2018), Health and Care Utilization of Transgender/Gender Non-Conforming Youth: A Population Based Study, *Pediatrics* at 4, DOI: 10.1542/peds.2017-1683.
- children with mental developmental disabilities (See, e.g., Bedard, C., Zhang, H.L. & Zucker, K.J. Gender Identity and Sexual Orientation in People with Developmental Disabilities. *Sex Disabil* 28, 165–175 (2010).  
<https://doi.org/10.1007/s11195-010-9155-7>
- children on the autistic spectrum (See, e.g., de Vries, A. L., Noens, I. L., Cohen-Kettenis, P. T., van Berckelaer-Onnes, I. A. & Doreleijers, T. A. Autism spectrum disorders in gender dysphoric children and adolescents. *J Autism Dev Disord* 40, 930-936, doi:10.1007/s10803-010-0935-9 (2010).
- children residing in foster care homes and adopted children (See, e.g., See e.g., D. Shumer et al. (2017), Overrepresentation of Adopted Adolescents at a Hospital-Based Gender Dysphoria Clinic, *Transgender Health* Vol. 2(1).

78. “GENDER AFFIRMATIVE” TREATMENTS DAMAGE or DESTROY HEALTHY BODILY ORGANS, LEADING TO LOSS OF ESSENTIAL BODILY FUNCTIONS (e.g. Medically Induced Sterilization): Despite the fact that gender dysphoria represents a psychological condition (as catalogued in the DSM since the third edition of this publication), some conceptualize the condition as a medical illness similar to cancer. When considered from this viewpoint, the goal of “treatment” is to alter the appearance of the body to conform to a patient’s perceived sexual identity, including the physical removal of unwanted “diseased” sexual organs. Since undesired body parts are fully formed and functional prior to hormonal or surgical intervention, the

result of these “therapies” is injury to innate sexual ability. In particular, loss or alteration of primary sexual organs leads directly to impairment of reproductive potential. Recognition of this obvious consequence is the basis for the development of new arenas of medical practice where there is an attempt to restore what has been intentionally destroyed. See, e.g., Ainsworth AJ, Al-lyse M, Khan Z. Fertility Preservation for Transgender Individuals: A Review. *Mayo Clin Proc.* 2020 Apr; 95(4):784-792. doi: 10.1016/j.mayocp.2019.10.040. Epub 2020 Feb 27. PMID: 32115195. As correctly noted by Dr. Levine, gender dysphoria is unique in that it is “the only psychiatric condition to be treated by surgery, even though no endocrine or surgical intervention package corrects any identified biological abnormality.” See, e.g., S. Levine (2016), *Reflections on the Legal Battles Over Prisoners with Gender Dysphoria*, *J. American Academy of Psychiatry and Law*, 44, 236 at 238 (“Reflections”), at 240.)

79. A DEVELOPMENTAL MODEL PROVIDES ALTERNATIVE HYPOTHESES TO THE UNEXAMINED “AFFIRMATON” MODEL: The diagnosis of “gender dysphoria” encompasses a diverse array of conditions. While the etiologic contributors to sex discordant gender identity remain to be fully identified and characterized, differences both in kind and degree within individuals and across varied populations creates challenges in establishing specific approaches to alleviate associated suffering. For example, data from adults cannot be assumed to apply equally to children. Nor can data from children who present with sex discordant gender pre-pubertally be presumed to apply to the growing number of post-pubertal adolescent females presenting with this condition.

80. NO COMPETENT, SCIENTIFICALLY VALID and RELIABLE COST-BENEFIT ANALYSIS HAS BEEN DONE ON “GENDER AFFIRMATIVE” TREATMENTS. When the FDA tests a drug, the safety analysis looks at all related risks. Specifically, the drug must not

only be effective, but it must not cause side effects that are more damaging than the proposed treatment. This is one of the gender transition industry's key weaknesses. Not only have the "treatments" *not* been proven reliably effective compared to *no* treatment, they are designed with existing knowledge of well-documented, long-term health problems and damages (e.g., testosterone use by transgender men increases the risk of fatal heart disease, estrogen use by transgender women increases risk of blood clots and strokes, gender transition industry treatments—if completed—can cause life-long sterility, etc.).

81. LACK OF INTEGRATION OF CARE BY PROVIDERS IN THE GENDER TRANSITION INDUSTRY INCREASES DANGERS TO PATIENTS: It is too often the case in the gender transition industry that "nobody is in charge" of a patient's care. The mental health professionals know little about the risks of surgery and the surgeons know little about the defects in mental health methodologies and the endocrinologists are only following the hormonal treatments and many are not aware of the serious methodological research defects in this field. Such disjointed care can increase dangers to patients. On cases showing such a lack of integration and uncertain chain of command, reliable measurements of the divergent, multi-disciplinary risks to patients of these treatments (e.g. hormones, incomplete therapy, or surgical side effects) are precluded and too often ignored. The plaintiffs' expert witness reports in this case appear to ignore this issue.

82. SUMMARY OPINIONS:

- There are no long-term, peer-reviewed published, reliable and valid, research studies documenting the number or percentage of patients receiving gender affirming medical interventions who are helped by such procedures.

- There are no long-term, peer-reviewed published, reliable and valid, research studies documenting the number or percentage of patients receiving gender affirming medical interventions who are injured or harmed by such procedures.
- There are no long-term, peer-reviewed published, reliable and valid, research studies documenting the reliability and validity of assessing gender identity by relying solely upon the expressed desires of a patient.
- There are no long-term, peer-reviewed published, reliable and valid, research studies documenting any valid and reliable biological, medical, surgical, radiological, psychological, or other objective assessment of gender identity or gender dysphoria.
- A currently unknown percentage and number of patients reporting gender dysphoria suffer from mental illness(es) that complicate and may distort their judgments and perceptions of gender identity.
- A currently unknown percentage and number of patients reporting gender dysphoria are being manipulated by a—peer group, social media, YouTube role modeling, and/or parental—social contagion and social pressure processes.
- Patients suffering from gender dysphoria or related issues have a right to be protected from experimental, potentially harmful treatments lacking reliable and valid, peer reviewed, published, long-term scientific evidence of safety and effectiveness.
- It would be a serious violation of licensing rules, ethical rules, and professional standards of care for a health care professional to provide gender transition or related procedures to any patient without first properly obtaining informed consent

including informing the patient and/or guardian(s) of the lack of valid and reliable on the long-term risks and benefits of “affirmation” treatments.

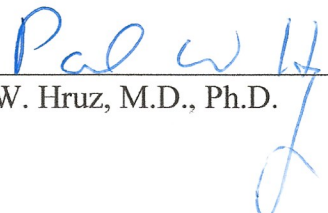
- A large percentage of children (over 80% in some studies) who questioned their gender identity will, if left alone, develop an acceptance of their natal (biological) sex.
- Medical treatments may differ significantly by sex according to chromosomal assessment but not gender identity. Misinforming physicians of a patient’s biological sex can have deleterious effects on treatment for medical conditions.
- Affirmation medical treatments—hormones and surgery—for gender dysphoria and “transitioning” have not been accepted by the relevant scientific communities (biology, genetics, neonatology, medicine, psychology, etc).
- Gender transition “affirmation” medical assessments and treatments—hormones and surgery—for gender dysphoria and “transitioning” have no known, peer reviewed and published error rates—the treatments and assessment methods lack demonstrated, reliable and valid error rates.
- Political activists, political activist physicians, and politically active medical organizations that operate by voting methodologies (e.g, WPATH, the American Medical Association, the American Academy of Pediatrics, the American Endocrine Society) are not the relevant scientific community, they are politically active professional organizations. These organizations operate via consensus-seeking methodology (voting) and political ideologies rather than evidence-based scientific methodologies.

- Experts in legal cases have an ethical obligation to honestly, fairly, and accurately discuss the international controversy regarding the safety, effectiveness, reliability, and credibility of the gender transition industry.
- With the limited and poor quality data currently available on the purported efficacy of blocking normally timed puberty, administering of cross-sex hormones and gender affirming surgeries in alleviating psychological morbidity for youth who experience sex-discordant gender identity and the associated serious medical risks associated with these interventions, it cannot be concluded that this approach is “medically necessary.”

83. LIMITATIONS ON EXPERT REPORTS: My opinions and hypotheses in this matter are—as all expert reports—subject to the limitations of documentary and related evidence, the impossibility of absolute predictions, as well as the limitations of social, biological, and medical science. I have not met with, nor personally interviewed, anyone in this case. As always, I have no expert opinions regarding the veracity of witnesses in this case. I have not yet reviewed all of the evidence in this case and my opinions are subject to change at any time as new information becomes available to me. Only the trier of fact can determine the credibility of witnesses and how scientific research may or may not be related to the specific facts of any particular case. In my opinion, a key role of an expert witness is to help the court, lawyers, parties, and the public understand and apply reliable scientific, technical, and investigative principles, hypotheses, methods, and information.

**I declare under penalty of perjury that the foregoing is true and correct.**

**Executed on May 1, 2022.**

  
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Paul W. Hruz, M.D., Ph.D.



## Curriculum Vitae

Date: 05/01/2022 01:47 PM

Name: Paul W. Hruz, M.D., Ph.D.

### **Contact Information**

Office:



Mail: Washington University in St. Louis  
School of Medicine  
Department of Pediatrics  
Endocrinology and Diabetes  
660 South Euclid Avenue  
St Louis MO 63110

Email:

Office:



### **Present Position**

Associate Professor of Pediatrics, Endocrinology and Diabetes

Associate Professor of Pediatrics, Cell Biology & Physiology

### **Education**

1987 BS, Chemistry, Marquette University, Milwaukee, WI  
1993 PhD, Biochemistry, Medical College of Wisconsin, Milwaukee, WI  
Elucidation of Structural, Mechanistic, and Regulatory Elements in 3-Hydroxy-3-Methylglutaryl-Coenzyme A Lyase, Henry Mizioro  
1994 MD, Medicine, Medical College of Wisconsin, Milwaukee, WI  
1994 - 1997 Pediatric Residency, University of Washington, Seattle, Washington  
1997 - 2000 Pediatric Endocrinology Fellowship, Washington University, Saint Louis, MO  
2017 Certification in Healthcare Ethics, National Catholic Bioethics Center, Philadelphia, PA

### **Academic Positions / Employment**

1996 - 1997 Locum Tenens Physician, Group Health of Puget Sound Eastside Hospital, Group Health of Puget Sound Eastside Hospital, Seattle, WA  
2000 - 2003 Instructor in Pediatrics, Endocrinology and Diabetes, Washington University in St. Louis, St. Louis, MO  
2003 - 2011 Assistant Professor of Pediatrics, Endocrinology and Diabetes, Washington University in St. Louis, St. Louis, MO  
2004 - 2011 Assistant Professor of Pediatrics, Cell Biology & Physiology, Washington University in St. Louis, St. Louis, MO  
2011 - Pres Associate Professor of Pediatrics, Cell Biology & Physiology, Washington University in St. Louis, St. Louis, MO

2011 - Pres Associate Professor of Pediatrics, Endocrinology and Diabetes, Washington University in St. Louis, St. Louis, MO

2012 - 2017 Division Chief, Endocrinology and Diabetes, Washington University in St. Louis, St. Louis, MO

### **Clinical Title and Responsibilities**

General Pediatrician, General Pediatric Ward Attending: 2-4 weeks per year, St. Louis Children's Hospital

2000 - Pres Pediatric Endocrinologist, Endocrinology Night Telephone Consult Service: Average of 2-6 weeks/per yr, St. Louis Children's Hospital

2000 - Pres Pediatric Endocrinologist, Inpatient Endocrinology Consult Service: 3-6 weeks per year, St. Louis Children's Hospital

2000 - Pres Pediatric Endocrinologist, Outpatient Endocrinology Clinic: Approximately 50 patient visits per month, St. Louis Children's Hospital

### **Teaching Title and Responsibilities**

2009 - Pres Lecturer, Markey Course-Diabetes Module

2020 - 2020 Facilitator, Reading Elective-Interdisciplinary/Miscellaneous Course #M80-800, Washington University School of Medicine

### **University, School of Medicine and Hospital Appointments and Committees**

#### **University**

2012 - 2020 Disorders of Sexual Development Multidisciplinary Care Program

#### **School of Medicine**

2013 - 2020 Molecular Cell Biology Graduate Student Admissions Committee

2014 - Pres Research Consultant, ICTS Research Forum - Child Health

#### **Hospital**

2000 - Pres Attending Physician, St. Louis Children's Hospital

### **Medical Licensure and Certifications**

1997 - Pres Board Certified in General Pediatrics

2000 - Pres MO Stae License #2000155004

2001 - Pres Board Certified in Pediatric Endocrinology & Metabolism

### **Honors and Awards**

1987 National Institute of Chemists Research and Recognition Award

1987 Phi Beta Kappa

1987 Phi Lambda Upsilon (Honorary Chemical Society)

1988 American Heart Association Predoctoral Fellowship Award

1994 Alpha Omega Alpha

1994 Armond J. Quick Award for Excellence in Biochemistry

1994	NIDDK/Diabetes Branch Most Outstanding Resident
1998	Pfizer Postdoctoral Fellowship Award
2002	Scholar, Child Health Research Center of Excellence in Developmental Biology at Washington University
2013	Julio V Santiago, M.D. Scholar in Pediatrics
2017	Redemptor Hominis Award for Outstanding Contributions to the Study of Bioethics
2018	Eli Lilly Outstanding Contribution to Drug Discovery: Emerging Biology Award
2018	Scholar-Innovator Award, Harrington Discovery Institute
2021	Linacre Award

### **Editorial Responsibilities**

#### **Editorial Ad Hoc Reviews**

	AIDS
	AIDS Research and Human Retroviruses
	American Journal of Pathology
	American Journal of Physiology
	British Journal of Pharmacology
	Circulation Research
	Clinical Pharmacology & Therapeutics
	Comparative Biochemistry and Physiology
	Diabetes
	Experimental Biology and Medicine
	Future Virology
	Journal of Antimicrobial Chemotherapy
	Journal of Clinical Endocrinology & Metabolism
	Journal of Molecular and Cellular Cardiology
	Obesity Research
2000 - Pres	Journal of Biological Chemistry
2013 - Pres	PlosOne
2016 - Pres	Scientific Reports
2018 - Pres	Nutrients

#### **Editorial Boards**

2014 - 2015	Endocrinology and Metabolism Clinics of North America
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### **National Panels, Committees**

2017 - Pres	Consultant, Catholic Health Association
2021 - Pres	Consulting Fellow, National Catholic Bioethics Center

### **National Boards**

2020 - Pres	WU ICTS Clinical and Translational Research Funding Program (CTRFP) Review Committee
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**Community Service Contributions****Professional Societies and Organizations**

1992 - 2004 American Medical Association  
 1994 - 2005 American Academy of Pediatrics  
 1995 - 2014 American Association for the Advancement of Science  
 1998 - Pres American Diabetes Association  
 1998 - Pres Endocrine Society  
 1999 - Pres Pediatric Endocrine Society  
 2004 - 2007 American Chemical Society  
 2004 - 2018 American Society for Biochemistry and Molecular Biology  
 2004 - 2020 Society for Pediatric Research  
 2005 - 2020 Full Fellow of the American Academy of Pediatrics  
 2013 - Pres International Society for Pediatric and Adolescent Diabetes  
 2018 - Pres American College of Pediatricians

**Major Invited Professorships and Lectures**

2002 Pediatric Grand Rounds, St. Louis Children's Hospital, St Louis, MO  
 2004 National Disease Research Interchange, Human Islet Cell Research Conference, Philadelphia, PA  
 2004 NIDA-NIH Sponsored National Meeting on Hormones, Drug Abuse and Infections, Bethesda, MD  
 2005 Endocrine Grand Rounds, University of Indiana, Indianapolis, IN  
 2005 The Collaborative Institute of Virology, Complications Committee Meeting, Boston, MA  
 2006 Metabolic Syndrome Advisory Board Meeting, Bristol-Meyers Squibb, Pennington, NJ  
 2007 American Heart Association and American Academy of HIV Medicine State of the Science Conference: Initiative to Decrease Cardiovascular Risk and Increase Quality of Care for Patients Living with HIV/AIDS, Chicago, IL  
 2007 Minority Access to Research Careers Seminar, University of Arizona, Tucson, AZ  
 2007 MSTP Annual Visiting Alumnus Lecture, Medical College of Wisconsin, Milwaukee, WI  
 2007 Pediatric Grand Rounds, St Louis Children's Hospital, St Louis, MO  
 2008 Division of Endocrinology, Diabetes and Nutrition Grand Rounds, Boston University, Boston, MA  
 2009 Pediatric Grand Rounds, St Louis Children's Hospital, St. Louis, MO  
 2010 American Diabetes Association Scientific Sessions, Symposium Lecture Orlando, FL  
 2010 School of Biological Sciences Conference Series, University of Missouri Kansas City, Kansas City, MO  
 2011 Life Cycle Management Advisory Board Meeting, Bristol-Myers Squibb, Chicago, IL  
 2013 Pediatric Grand Rounds, St Louis Children's Hospital, ST LOUIS, MO  
 2013 Clinical Practice Update Lecture, St Louis Children's Hospital, St Louis, MO  
 2014 Pediatric Academic Societies Meeting, Vancouver, Canada  
 2014 American Diabetes Association 74th Scientific Sessions, San Francisco, CA  
 2017 Division of Pediatric Endocrinology Metabolism Rounds, University of Michigan, Ann Arbor, MI

2017 Catholic Medical Association National Conference, Denver, CO  
2018 Obstetrics, Gynecology & Women's Health Grand Rounds, Saint Louis University, St. Louis, MO  
2018 Medical Grand Rounds, Sindicato Médico del Uruguay, Montevideo, Uruguay  
2018 Internal Medicine Grand Rounds, Texas Tech , Lubbock, TX  
2019 Veritas Center for Ethics in Public Life Conference, Franciscan University, Steubenville, OH  
2019 MaterCare International Conference, Rome, Italy  
2019 Child Health Policy Forum, Notre Dame University, South Bend , IN  
2021 Obstetrics & Gynecology Grand Rounds, University of Tennessee, Knoxville , TN

### **Consulting Relationships and Board Memberships**

1996 - 2012 Consultant, Bristol Myers Squibb  
1997 - 2012 Consultant, Gilead Sciences

### **Research Support**

#### **Completed Governmental Support**

2001 - 2006 K-08 A149747, NIH  
Mechanism of GLUT4 Inhibition by HIV Protease Inhibitors  
Role: Principal Investigator  
2007 - 2012 R01  
Mechanisms for Altered Glucose Homeostasis During HAART  
Role: Principal Investigator  
Total cost: \$800,000.00  
2009 - 2011 R01 Student Supp  
Mechanisms for Altered Glucose Homeostasis During HAART  
Role: Principal Investigator  
Total cost: \$25,128.00  
2009 - 2014 R01  
Direct Effects of Antiretroviral Therapy on Cardiac Energy Homeostasis  
Role: Principal Investigator  
Total cost: \$1,250,000.00  
2017 - 2019 R-21 1R21AI130584 , National Institutes of Health  
SELECTIVE INHIBITION OF THE P. FALCIPARUM GLUCOSE TRANSPORTER PFHT  
Role: Principal Investigator  
Total cost: \$228,750.00

#### **Completed Non-Governmental Support**

2015 Novel HIV Protease Inhibitors and GLUT4  
Role: Principal Investigator  
2008 - 2011 II  
Insulin Resistance and Myocardial Glucose Metabolism in Pediatric Heart Failure  
Role: Co-Investigator  
PI: Hruz  
Total cost: \$249,999.00

2009 - 2012 Research Program  
Regulation of GLUT4 Intrinsic Activity  
Role: Principal Investigator  
Total cost: \$268,262.00

2010 - 2011 Protective Effect of Saxagliptin on a Progressive Deterioration of Cardiovascular Function  
Role: Principal Investigator

2012 - 2015 II  
Solution-State NMR Structure and Dynamics of Facilitative Glucose Transport Proteins  
Role: Principal Investigator  
Total cost: \$375,000.00

2017 - 2020 Prevention And Treatment Of Hepatic Steatosis Through Selective Targeting Of GLUT8  
Role: Co-Principal Investigator  
PI: DeBosch  
Total cost: \$450,000.00

2017 - 2021 Matching Micro Grant  
Novel Treatment of Fatty Liver Disease (CDD/LEAP)  
Role: Principal Investigator  
Total cost: \$68,500.00

2018 - 2021 LEAP Innovator Challenge  
Novel Treatment of Fatty Liver Disease  
Role: Principal Investigator  
Total cost: \$68,500.00

2019 - 2021 Scholar-Innovator Award HDI2019-SI-4555 , Harrington Foundation  
Novel Treatment of Non-Alcoholic Fatty Liver Disease  
Role: Principal Investigator  
Total cost: \$379,000.00

**Current Governmental Support**

2021 - 2025 R-01 DK126622 (Co-investigator), 8/25/2021-7/31/2025, NIH-NIDDK, , NIH  
Leveraging glucose transport and the adaptive fasting response to modulate hepatic metabolism  
Role: Co-Investigator  
PI: DeBosch

**Pending Non-Governmental Support**

2015 Novel HIV Protease Inhibitors and GLUT4  
Role: Principal Investigator

**Trainee/Mentee/Sponsorship Record****Current Trainees**

2019 Ava Suda, Other, Pre-med

**Past Trainees**

2002 - 2002 Nishant Raj- Undergraduate Student, Other  
Study area: Researcher

2002 - 2010 Joseph Koster, PhD, Postdoctoral Fellow  
Study area: Researcher

2003 - 2004 Johann Hertel, Medical Student  
Study area: Research  
Present position: Assistant Professor, University of North Carolina, Chapel Hill, NC

2003 - 2003 John Paul Shen, Medical Student  
Study area: Research

2004 - 2005 Carl Cassel- High School Student, Other  
Study area: Research

2004 - 2004 Christopher Hawkins- Undergraduate Student, Other  
Study area: Researcher

2004 - 2004 Kaiming Wu- High School Student, Other  
Study area: Research

2005 - 2005 Helena Johnson, Graduate Student

2005 - 2005 Jeremy Etzkorn, Medical Student  
Study area: Researcher

2005 - 2005 Dominic Doran, DSc, Postdoctoral Fellow  
Study area: HIV Protease Inhibitor Effects on Exercise Tolerance

2006 - 2006 Ramon Jin, Graduate Student  
Study area: Research

2006 - 2006 Taekyung Kim, Graduate Student  
Study area: Research

2007 - 2007 Jan Freiss- Undergraduate Student, Other  
Study area: Researcher

2007 - 2008 Kai-Chien Yang, Graduate Student  
Study area: Research  
Present position: Postdoctoral Research Associate, University of Chicago

2007 - 2007 Paul Buske, Graduate Student  
Study area: Research

2007 - 2007 Randy Colvin, Medical Student  
Study area: Researcher

2008 - 2011 Arpita Vyas, MD, Clinical Fellow  
Study area: Research  
Present position: Assistant Professor, Michigan State University, Lansing MI

2008 - 2009 Candace Reno, Graduate Student  
Study area: Research  
Present position: Research Associate, University of Utah

2008 - 2012 Dennis Woo- Undergraduate Student, Other  
Study area: Researcher  
Present position: MSTP Student, USC, Los Angeles CA

2008 - 2008 Temitope Aiyejorun, Graduate Student  
Study area: Research

2009 - 2009 Anne-Sophie Stolle- Undergraduate Student, Other  
Study area: Research

2009 - 2009 Matthew Hruz- High School Student, Other  
Study area: Research  
Present position: Computer Programmer, Consumer Affairs, Tulsa OK



2009 - 2009 Stephanie Scherer, Graduate Student  
Study area: Research

2010 - 2014 Lauren Flessner, PhD, Postdoctoral Fellow  
Present position: Instructor, Syracuse University

2010 - 2010 Constance Haufe- Undergraduate Student, Other  
Study area: Researcher

2010 - 2011 Corinna Wilde- Undergraduate Student, Other  
Study area: Researcher

2010 - 2010 Samuel Lite- High School Student, Other  
Study area: Research

2011 - 2016 Thomas Kraft, Graduate Student  
Study area: Glucose transporter structure/function  
Present position: Postdoctoral Fellow, Roche, Penzberg, Germany

2011 - 2011 Amanda Koenig- High School Student, Other  
Study area: Research

2011 - 2012 Lisa Becker- Undergraduate Student, Other

2011 - 2011 Melissa Al-Jaoude- High School Students, Other

2014 - 2014 David Hannibal, Clinical Research Trainee

## **Bibliography**

### **A. Journal Articles**

1. Hruz PW, Narasimhan C, Miziorko HM. 3-Hydroxy-3-methylglutaryl coenzyme A lyase: affinity labeling of the *Pseudomonas mevalonii* enzyme and assignment of cysteine-237 to the active site. *Biochemistry*. 1992;31(29):6842-7. PMID:[1637819](#)
2. Hruz PW, Miziorko HM. Avian 3-hydroxy-3-methylglutaryl-CoA lyase: sensitivity of enzyme activity to thiol/disulfide exchange and identification of proximal reactive cysteines. *Protein Sci*. 1992;1(9):1144-53. doi:[10.1002/pro.5560010908](#) PMCID:[PMC2142181](#) PMID:[1304393](#)
3. Mitchell GA, Robert MF, Hruz PW, Wang S, Fontaine G, Behnke CE, Mende-Mueller LM, Schappert K, Lee C, Gibson KM, Miziorko HM. 3-Hydroxy-3-methylglutaryl coenzyme A lyase (HL). Cloning of human and chicken liver HL cDNAs and characterization of a mutation causing human HL deficiency. *J Biol Chem*. 1993;268(6):4376-81. PMID:[8440722](#)
4. Hruz PW, Anderson VE, Miziorko HM. 3-Hydroxy-3-methylglutaryl dithio-CoA: utility of an alternative substrate in elucidation of a role for HMG-CoA lyase's cation activator. *Biochim Biophys Acta*. 1993;1162(1-2):149-54. PMID:[8095409](#)
5. Roberts JR, Narasimhan C, Hruz PW, Mitchell GA, Miziorko HM. 3-Hydroxy-3-methylglutaryl-CoA lyase: expression and isolation of the recombinant human enzyme and investigation of a mechanism for regulation of enzyme activity. *J Biol Chem*. 1994;269(27):17841-6. PMID:[8027038](#)
6. Hruz PW, Mueckler MM. Cysteine-scanning mutagenesis of transmembrane segment 7 of the GLUT1 glucose transporter. *J Biol Chem*. 1999;274(51):36176-80. PMID:[10593902](#)
7. Murata H, Hruz PW, Mueckler M. The mechanism of insulin resistance caused by HIV protease inhibitor therapy. *J Biol Chem*. 2000;275(27):20251-4. doi:[10.1074/jbc.C000228200](#) PMID:[10806189](#)
8. Hruz PW, Mueckler MM. Cysteine-scanning mutagenesis of transmembrane segment 11 of the GLUT1 facilitative glucose transporter. *Biochemistry*. 2000;39(31):9367-72. PMID:[10924131](#)
9. Hruz PW, Mueckler MM. Structural analysis of the GLUT1 facilitative glucose transporter (review). *Mol Membr Biol*. 2001;18(3):183-93. PMID:[11681785](#)



10. Murata H, Hruz PW, Mueckler M. Investigating the cellular targets of HIV protease inhibitors: implications for metabolic disorders and improvements in drug therapy. *Curr Drug Targets Infect Disord.* 2002;2(1):1-8. PMID:[12462148](#)
11. Hruz PW, Murata H, Qiu H, Mueckler M. Indinavir induces acute and reversible peripheral insulin resistance in rats. *Diabetes.* 2002;51(4):937-42. PMID:[11916910](#)
12. Murata H, Hruz PW, Mueckler M. Indinavir inhibits the glucose transporter isoform Glut4 at physiologic concentrations. *AIDS.* 2002;16(6):859-63. PMID:[11919487](#)
13. Koster JC, Remedi MS, Qiu H, Nichols CG, Hruz PW. HIV protease inhibitors acutely impair glucose-stimulated insulin release. *Diabetes.* 2003;52(7):1695-700. PMCID:[PMC1403824](#) PMID:[12829635](#)
14. Liao Y, Shikapwashya ON, Shteyer E, Dieckgraefe BK, Hruz PW, Rudnick DA. Delayed hepatocellular mitotic progression and impaired liver regeneration in early growth response-1-deficient mice. *J Biol Chem.* 2004;279(41):43107-16. doi:[10.1074/jbc.M407969200](#) PMID:[15265859](#)
15. Shteyer E, Liao Y, Muglia LJ, Hruz PW, Rudnick DA. Disruption of hepatic adipogenesis is associated with impaired liver regeneration in mice. *Hepatology.* 2004;40(6):1322-32. doi:[10.1002/hep.20462](#) PMID:[15565660](#)
16. Hertel J, Struthers H, Horj CB, Hruz PW. A structural basis for the acute effects of HIV protease inhibitors on GLUT4 intrinsic activity. *J Biol Chem.* 2004;279(53):55147-52. doi:[10.1074/jbc.M410826200](#) PMCID:[PMC1403823](#) PMID:[15496402](#)
17. Yan Q, Hruz PW. Direct comparison of the acute in vivo effects of HIV protease inhibitors on peripheral glucose disposal. *J Acquir Immune Defic Syndr.* 2005;40(4):398-403. PMCID:[PMC1360159](#) PMID:[16280693](#)
18. Hruz PW. Molecular Mechanisms for Altered Glucose Homeostasis in HIV Infection. *Am J Infect Dis.* 2006;2(3):187-192. PMCID:[PMC1716153](#) PMID:[17186064](#)
19. Turmelle YP, Shikapwashya O, Tu S, Hruz PW, Yan Q, Rudnick DA. Rosiglitazone inhibits mouse liver regeneration. *FASEB J.* 2006;20(14):2609-11. doi:[10.1096/fj.06-6511fje](#) PMID:[17077279](#)
20. Hruz PW, Yan Q, Struthers H, Jay PY. HIV protease inhibitors that block GLUT4 precipitate acute, decompensated heart failure in a mouse model of dilated cardiomyopathy. *FASEB J.* 2008;22(7):2161-7. doi:[10.1096/fj.07-102269](#) PMID:[18256305](#)
21. Hruz PW. HIV protease inhibitors and insulin resistance: lessons from in-vitro, rodent and healthy human volunteer models. *Curr Opin HIV AIDS.* 2008;3(6):660-5. doi:[10.1097/COH.0b013e3283139134](#) PMCID:[PMC2680222](#) PMID:[19373039](#)
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2. Paul W Hruz. Medical Approaches to Alleviating Gender Dysphoria In: Edward J Furton, eds. *Transgender Issues in Catholic Health Care* Philadelphia PA; 2021:1-42.

## C4. Invited Publications

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3. Hruz PW. Molecular mechanisms for insulin resistance in treated HIV-infection. *Best Pract Res Clin Endocrinol Metab*. 2011;25(3):459-68. PMCID: [PMC3115529](#) PMID: [21663839](#)
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5. Hruz PW. Commentary. *Clin Chem*. 2015;61(12):1444. PMID: [26614228](#)
6. Hruz PW, Mayer LS, and McHugh PR. Growing Pains: Problems with Pubertal Suppression in Treating Gender Dysphoria *The New Atlantis*. 2017;52:3-36.
7. Hruz, PW. The Use of Cross-Sex Steroids in Treating Gender Dysphoria *Natl Cathol Bioeth Q*. 2018;17(4):1-11.
8. Hruz, PW. Experimental Approaches to Alleviating Gender Dysphoria in Children *Nat Cathol Bioeth Q*. 2019;19(1):89-104.

## Clinician Educator Portfolio

### CLINICAL CONTRIBUTIONS

#### Summaries of ongoing clinical activities

	General Pediatrician, General Pediatric Ward Attending: 2-4 weeks per year, St. Louis Children's Hospital
2000 - Pres	Pediatric Endocrinologist, Endocrinology Night Telephone Consult Service: Average of 2-6 weeks/per yr, St. Louis Children's Hospital
2000 - Pres	Pediatric Endocrinologist, Inpatient Endocrinology Consult Service: 3-6 weeks per year, St. Louis Children's Hospital
2000 - Pres	Pediatric Endocrinologist, Outpatient Endocrinology Clinic: Approximately 50 patient visits per month, St. Louis Children's Hospital

### EDUCATIONAL CONTRIBUTIONS

#### Direct teaching

##### Classroom

2009 - Pres	Lecturer, Markey Course-Diabetes Module
2020 - 2020	Facilitator, Reading Elective-Interdisciplinary/Miscellaneous Course #M80-800, Washington University School of Medicine

##### Clinical

2000 - Pres	Lecturer, Medical Student Growth Lecture (Women and Children's Health Rotation): Variable
2000 - Pres	Lecturer, Pediatric Endocrinology Journal Club: Presentations yearly
2009 - Pres	Facilitator, Medical Student Endocrinology and Metabolism Course, Small group
2016 - Pres	Facilitator, Medical Student Endocrinology and Metabolism Course, Small group

Other

Facilitator, Cell Biology Graduate Student Journal Club, 4 hour/year

Facilitator, Discussion: Pituitary, Growth & Gonadal Cases, 2 hours/year

2000 - Pres Lecturer, Metabolism Clinical Rounds/Research Seminar: Presentations twice yearly

2009 - Pres Facilitator, Biology 5011- Ethics and Research Science, 6 hours/year

2016 - Pres Lecturer, Cell Signaling Course, Diabetes module, 3 hours/year

**ANNUAL SUMMARIES**

**OTHER**

**Participated in research studies**

Pres Development of Novel Small Molecule Hexose Transport Inhibitors for Glucose-Dependent Diseases Paul W Hruz.

**DOC. 69-6**

**UNITED STATES DISTRICT COURT  
MIDDLE DISTRICT OF ALABAMA  
NORTHERN DIVISION**

REV. PAUL A. EKNES-TUCKER,	)	
<i>et al.</i> ,	)	
	)	
<i>Plaintiffs</i> ,	)	
	)	
v.	)	No. 2:22-cv-00184-LCB-SRW
	)	
KAY IVEY, in her official capacity	)	
as Governor of the State of Alabama,	)	
<i>et al.</i> ,	)	
	)	
<i>Defendants</i> .	)	

**DECLARATION OF PATRICK HUNTER**

My name is Patrick Hunter MD. I am over the age of 19, I am qualified to give this declaration, and, I have personal knowledge of the matters set forth herein. My CV is attached to this declaration.

In the past four years, I have not provided expert testimony in any case.

I am compensated the rate of \$ 450 per hour for my work on this matter. My compensation is not dependent upon the substance of my opinions or the outcome of the case.



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1. I submit this expert declaration based upon my personal knowledge, my experience as a pediatrician with an advanced degree in bioethics, and my review of the literature discussed below.
2. If called to testify in this matter, I would testify truthfully based on my expert opinion.

## **I. Qualifications and Experience**

3. I am a pediatrician with a master's degree in bioethics. I received my medical degree from the University of Louisville School of Medicine in 1992 and completed a pediatric residency at Tripler Army Medical Center in 1995. I obtained board certification in general pediatrics in 1995 and have continuously maintained that certification. I obtained a Master of Science degree in bioethics from the University of Mary in 2020. I have served on the ethics committee at Nemours Children Hospital, Orlando.
4. At Scotland Memorial Hospital, I served as pediatric department chair, medical executive committee chair, chief of the medical staff, and on the physician effectiveness committee. This physician effectiveness committee addressed physician professionalism and ethics. I also served on this hospital's governing board and operating committee.
5. I have held teaching positions at the rank of clinical and associate professors at the University of Hawaii and the Uniformed Services University of the Health Sciences. I currently hold academic positions at the University of Central Florida and Florida State University. I have taught pediatrics and bioethics to medical students and resident physicians at Tripler Army Medical Center, the University of Central Florida, and Nemours Children's Hospital in Orlando, Florida.
6. My path into the field of gender medicine is unique. For my first 20 plus years in practice, young people with transgender identity were an extremely rare phenomenon. While gay,

lesbian, and gender non-conforming patients were not uncommon, none of the patients in my care were declaring a transgender identity.

7. However, in 2015, I began to see young patients, exclusively adolescent females, who asserted that they were transgender. I was surprised that the cases I was seeing had “come out” around and after puberty. This sudden epidemiological change did not agree with what I had learned.
8. Historically, gender identity disorder and gender dysphoria affected primarily pre-pubescent boys. These young boys were adamant about their female identity. Gender dysphoria was obvious to the family, and had begun at a young age (approximately 3-5 year old), long before children are developmentally capable of hiding facts from their parents. This presentation of cross-sex identification has been described in the literature as “persistent, insistent and consistent.” The rare cases of such young boys (and on an even rarer occasion, girls) did not have to “come out.”
9. I now know that my experience with seeing this unusual cohort of adolescents with no history of “persistent, insistent and consistent” cross-sex identity in early childhood closely mirrors the trends seen by other clinicians. In the last eight years there has been an unexplained, dramatic rise in adolescents declaring distress with their sexed bodies and seeking hormones and surgeries to stop the development of secondary sex characteristics.
10. These puzzling epidemiological shifts made me eager to learn what is known about pediatric gender transition. This has involved reading hundreds of papers in this field that have encompassed research, practice guidelines, epidemiology, opinions, history, and ethics. This reading has been from journals that include the NEJM, JAMA, Pediatrics, British Medical Journal, Lancet, Archives of Sexual Behavior, Journal of Homosexuality, Sexual Medicine,

the Journal of American Academy of Child and Adolescent Psychiatry, American Psychologist, PLOS ONE, the Journal of Clinical Endocrinology and Metabolism, and many others. I have also studied professional guidelines from Finland, Sweden, Australia, New Zealand, England, France, and The Netherlands.

11. Importantly, I have also read the first-person accounts of patients in the lay literature, where patient stories and professional concerns are increasingly being voiced. It is my opinion that concerns regarding the so-called “gender-affirmative care model” are often barred from the medical literature.
12. My comprehensive review of the literature revealed that public health authorities in a number of progressive European countries have conducted independent evaluations of the evidence. They have found the evidence for youth transition to be lacking, any benefits to be of very low certainty, and the harms significant.
13. The risks of “gender-affirmative care” in youth are real and the harms are considerable. The most self-evident risk is that the treatment frequently leads to infertility. In fact, if the Endocrine Society’s treatment recommendations for youth are followed, and puberty blockers are followed by cross-sex hormones, sterility is nearly assured. Other risks are less certain, but alarming evidence is emerging that bone health is adversely affected. A growing list of concerns includes the effect on developing brains, cardiovascular complications of cross-sex hormones, increased risk for cancer, and others. Arguably the greatest harms are regret and detransition after irreversible bodily changes, sterilization, and impairment of sexual function that is wrought by hormones and surgery.

14. The unfavorable risk/benefit ratio of pediatric transition is the reason why a growing number of liberal western countries are now sharply scaling back the practice of pediatric gender transition.
15. I have always had a keen interest in medical ethics and often considered formal education in the field. I originally wanted to explore the merging of medicine and business—hospital systems dominating the marketplace and physicians becoming employees—and how this evolution was impacting the ethics of medical care. What I was learning about gender dysphoria further propelled my interest in an ethics degree. I undertook a study of bioethics, completing my master’s degree in bioethics in 2020.
16. In my degree, much effort was focused on the growing popularity of the so-called “gender-affirmative care,” which delivers life-altering, permanent interventions to minors that involve sterilizing procedures. I have focused on ethical dilemmas, such as whether minors have the capacity to give a meaningful informed consent.
17. My research has given me the opportunity to work with experts in the field of gender medicine from all over the world, including Sweden, Finland, England, Australia, Canada, and the United States. I have lectured with Dr. Rittakerttu Kaltiala, a child and adolescent psychiatrist and a leading world expert in transgender care for youth. Dr. Kaltiala was instrumental in recently changing Finland’s national transgender practice guidelines, when they recognized the harms being done to youth. I have also lectured on this topic to The National Academy of Science in France. I am a member of the group’s scientific council. Recently, my letter outlining concerns with the practice of pediatric gender transition was

published by JAMA Pediatrics.<sup>1</sup> I have authored several recent manuscripts that are currently under review.

18. To round out my academic grasp of the ethical issues, I have also engaged with individuals who transitioned as youth. Some have detransitioned. Some have remained transitioned. I have learned a lot from these brave patients who have been the trailblazers in the highly experimental field of pediatric gender transition.
19. I approach gender dysphoria, gender medicine, and transgender patients from both the clinical and the ethical perspectives. First and foremost, clinical care for patients that suffer from gender dysphoria must offer the greatest benefits. Care must aim for optimal psychological, physical, sexual, and reproductive well-being. Benefits must exceed harms. The well-respected medical truism must prevail: First, do no harm.
20. I will devote part of this declaration to the profound ethical concerns that all physicians should have when treating children with gender dysphoria with medical interventions. It is my conclusion as a bioethicist that the practice of prescribing puberty blockers, cross-sex-hormones, and surgeries to minors violates every key principle of biomedical ethics.
21. Based on numerous conversations and interactions with other pediatricians, it is my opinion that many share my concerns about the unusually high numbers of adolescents requesting gender reassignment and the “gender-affirming care” they are given. Many providers are concerned about the irreversible, profound, life-long changes that these poorly evidenced interventions entail. However, in our current climate, where political activism has taken over

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<sup>1</sup> Hunter PK. Political Issues Surrounding Gender-Affirming Care for Transgender Youth. *JAMA Pediatr*. Published online December 20, 2021. doi:[10.1001/jamapediatrics.2021.5348](https://doi.org/10.1001/jamapediatrics.2021.5348)

the medical profession, my colleagues are too afraid to speak out publicly. They fear being accused of “transphobia,” or fear losing their employment.

22. Gender-dysphoric youth are suffering, and they deserve our compassion and care. The question is not *whether to treat them*, but rather, *how to treat them* in a way that promotes their long-term health and well-being. It is my strong opinion, supported by a growing number of leading pediatric gender clinics and public health authorities in the western world, that hormonal and surgical interventions should be reserved for mature adults, while minors should be treated with supportive psychological care.
23. This is because many minors will find that their trans identity is a transient phase in their identity formation—a realization that is increasingly common among previously trans-identified youth. There is a growing visibility of detransitioned young adults. They regret that they were allowed to get the interventions they so disparately desired at the time, but now realize these interventions were a mistake. Those who persist in their transgender identity can undergo interventions as adults and can be highly successful in their transition. We have many visible examples of successful transitioned adults.
24. One symbol of the medical profession is Asclepias’s Rod, with a single snake wrapped around the rod. The rod is the walking stick that the physician uses to travel from home to home to care for those in need. The snake as a reminder, to both physician and patient, that the physician has the power to both heal and to harm.<sup>2</sup>
25. Below, I outline my position that “gender-affirmative” hormonal and surgical interventions for minors on the balance do more harm than good, and that these interventions should be

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<sup>2</sup> Cavanaugh TA. *Hippocrates’ Oath and Asclepius’ Snake*. Vol 1. Oxford University Press; 2017.  
doi:[10.1093/med/9780190673673.001.0001](https://doi.org/10.1093/med/9780190673673.001.0001)

delayed until a young person’s identity is stabilized, full maturity is reached, and true informed consent is attainable.

## **II. Summary of Key Positions**

Below is a summary of my key opinions. I will expand on these opinions further.

- Gender identity is not biologically predetermined
- Transgender identity in young people typically resolves
- The original research on which the practice of pediatric transition rests no longer applies to the currently presenting cases
- There is no established standard of care for transgender-identified youth
- “Gender-affirming” interventions for youth cannot be ethically justified

## **III. Key Positions**

### **A. Gender Identity is not biologically predetermined**

26. Proponents of treating young people with “gender-affirming” hormones and surgeries assert that gender identity is biologically predetermined and, therefore, immutable. They argue that gender-dysphoric adolescents were born “transgender” and will always be “transgender”—much like children born with a congenital disorder such as a cleft palate. Thus, they argue that it is cruel and nonsensical to delay physical alterations to the bodies needed to make their future lives easier.

27. If one is to believe gender identity is biologically predetermined and immutable, and children presenting with gender dysphoria are simply “transgender children” who were born with a

brain-body mismatch, a person holding such beliefs would reason that medical doctors should try to intervene as early as possible to “fix” the body. This is exactly the rationale that the expert witnesses for the plaintiffs in this case are presenting.

28. However, these claims are patently untrue. Despite decades of trying to prove that gender identity is biologically predetermined, the body of evidence points to something entirely different: that biology is far from deterministic, and that a transgender identity arises instead in response to is a combination of factors.

29. Below I present some of the arguments that demonstrate decisively that “gender identity” is not biologically predetermined.

i. Brain studies have not been able to demonstrate a “transgender brain”

30. Despite a number of brain studies that attempted to demonstrate that there is a distinctive brain structure that differentiates people with a transgender identity from the rest, no study has been able to demonstrate a pattern or structure unique to the “transgender brain.” The few differences that have been noted disappear after researchers control for sexual orientation and exposure to hormonal interventions that gender dysphoric people undergo, or the studies are too small or unable to control for these or other known confounding factors. Brain



researchers clearly state that their findings do not justify statements suggesting gender dysphoria is a biological condition.<sup>3, 4, 5, 6</sup>

ii. Identical twin studies challenge the notion that gender identity is biologically predetermined

31. Identical twin studies represent one the best available methods to test biological determinism.

If gender identity were to be predetermined by one's biology whereby certain children are simply born with a "transgender brain," we would expect both identical twins to have a concordant gender identity majority of the time. Instead, the research into pairs of identical twins shows that if one of the identical twins has a transgender identity the chance that the other twin is also transgender identified is less than 30%.<sup>7</sup>

32. It should be noted that a 30% transgender identity concordance found in identical twins is much higher than would occur by chance, which raises the possibility of biological influence for the formation of a transgender identity, alongside other possibilities. However, the 70% discordance in identical twins' transgender identity strongly signals that a transgender identity is not predetermined by one's genes or prenatal factors.

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<sup>3</sup> Mueller SC, De Cuypere G, T'Sjoen G. Transgender Research in the 21st Century: A Selective Critical Review From a Neurocognitive Perspective. *AJP*. 2017;174(12):1155-1162. doi:[10.1176/appi.ajp.2017.17060626](https://doi.org/10.1176/appi.ajp.2017.17060626)

<sup>4</sup> Frigerio A, Ballerini L, Valdés Hernández M. Structural, Functional, and Metabolic Brain Differences as a Function of Gender Identity or Sexual Orientation: A Systematic Review of the Human Neuroimaging Literature. *Arch Sex Behav*. 2021;50(8):3329-3352. doi:[10.1007/s10508-021-02005-9](https://doi.org/10.1007/s10508-021-02005-9)

<sup>5</sup> Mueller SC, Guillamon A, Zubiaurre-Elorza L, et al. The Neuroanatomy of Transgender Identity: Mega-Analytic Findings From the ENIGMA Transgender Persons Working Group. *The Journal of Sexual Medicine*. 2021;18(6):1122-1129. doi:[10.1016/j.jsxm.2021.03.079](https://doi.org/10.1016/j.jsxm.2021.03.079)

<sup>6</sup> Mueller SC, Guillamon A, Zubiaurre-Elorza L, et al. The Neuroanatomy of Transgender Identity: Mega-Analytic Findings From the ENIGMA Transgender Persons Working Group. *The Journal of Sexual Medicine*. 2021;18(6):1122-1129. doi:[10.1016/j.jsxm.2021.03.079](https://doi.org/10.1016/j.jsxm.2021.03.079)

<sup>7</sup> Diamond M. Transsexuality Among Twins: Identity Concordance, Transition, Rearing, and Orientation. *International Journal of Transgenderism*. 2013;14(1):24-38. doi:[10.1080/15532739.2013.750222](https://doi.org/10.1080/15532739.2013.750222)

iii. Peer-reviewed publications acknowledge that transgender identity arises in response to a complex interplay of multiple factors

33. The fact that transgender identity emerges due to the interplay of a multitude of factors, rather than having a biological cause, is widely recognized. In fact, Dr. Rosenthal, one of the expert witnesses for the plaintiffs acknowledged this in his 2014 study:<sup>8</sup>

*... studies have demonstrated that “gender identity”—a person’s inner sense of self as male, female, or occasionally a category other than male or female—...likely reflects a complex interplay of biological, environmental, and cultural factors.”*  
(Rosenthal, 2014, p. 4379)

iv. The “gender identity” theory has never been properly tested

34. While it is evident that some people have a transgender identity, and “gender dysphoria” is a diagnosable DSM-5 psychological disorder, what “gender identity” is more generally, and whether and how it varies from one’s awareness of one’s sex for the rest of the population, is yet to be elucidated. The claims that “everyone has a gender identity,” and that one’s gender identity is a different entity than one’s awareness of one’s own sex, have never been put to test.

35. It is worth noting that the very concept of a “gender identity” is relatively new, popularized by the psychologist Dr. John Money in the 1960’s. Dr. Money’s theories about gender identity developed as he experimented on identical twin boys, one of whom was being raised

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<sup>8</sup> Rosenthal SM. Approach to the Patient: Transgender Youth: Endocrine Considerations. *The Journal of Clinical Endocrinology & Metabolism*. 2014;99(12):4379-4389. doi:[10.1210/jc.2014-1919](https://doi.org/10.1210/jc.2014-1919)

as a girl at Dr. Money's advice. Dr. Money made this recommendation following a circumcision accident that left the boy without a penis. To help the twin raised as a girl embrace his female gender role, Dr. Money performed highly unethical experiments on the boys, including making the siblings examine each other's genitals and perform simulated sexual acts with one another.

36. Initially, the twin boy raised as a girl appeared to have embraced the female identity, which Dr. Money took as validation of his gender identity theory. However, the twin raised in the female gender role eventually re-identified with his biological sex. Tragically, both twins died young, one from a suicide, and the other from a drug overdose.<sup>9</sup> The parents of the twins blamed Dr. Money's experiments as contributing to their sons' mental health struggles and premature death.
37. The proponents of "gender-affirming" hormonal and surgical interventions for minors claim that Dr. Money's experiments proved that gender identity is biologically predetermined and immutable (since the child raised as a girl eventually identified as a boy, despite the psychologist's efforts to the contrary). However, few conclusions can be drawn from a single case that involved such unusual circumstances.
38. More than anything, this experiment demonstrates the problematic origins of the gender identity theory and highlights the profound ethical problems with the currently ongoing social, medical, and surgical experimentation on minors in an attempt to deny or obfuscate their sex.

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<sup>9</sup> John Colapinto., 2013. *As nature made him: the boy who was raised as a girl*. HarperCollins Publishers.

## B. Transgender identity in young people typically resolves

39. During childhood, adolescence, and young adulthood, an individual's identity continues to develop and change. Historical data shows that most cases of a cross-sex identity in children resolve before they reach mature adulthood. Research confirms that the majority of such youth grow up to be gay, lesbian, or bisexual adults. In fact, a period of cross-sex identification in childhood is a common developmental pathway of gay adults.<sup>10, 11</sup>
40. Contrary to the assertions of the proponents of "gender affirmation," the tendency of a cross-sex identity to resolve is not coerced, but rather happens through the natural course of undergoing puberty and reaching maturity. While the mechanism by which this change occurs is not exactly known, it has been observed that experiencing romantic and sexual encounters and undergoing physical changes of puberty play a key role.<sup>12,13</sup>
41. In talking about the permanent vs. transient nature of transgender identity, is important to differentiate between two known variants of gender dysphoria in young people: the "classical" presentation where gender dysphoria begins in early childhood (typically between ages 3-5), and the novel and now-predominant variant where older children "come out" as transgender around or after the onset of puberty.

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<sup>10</sup> See Cantor, 2020

<sup>11</sup> Korte A, Goecker D, Krude H, Lehmkuhl U, Grüters-Kieslich A, Beier KM. Gender Identity Disorders in Childhood and Adolescence. *Dtsch Arztebl Int.* 2008;105(48):834-841. doi:[10.3238/arztebl.2008.0834](https://doi.org/10.3238/arztebl.2008.0834)

<sup>12</sup> Steensma TD, Biemond R, de Boer F, Cohen-Kettenis PT. Desisting and persisting gender dysphoria after childhood: A qualitative follow-up study. *Clin Child Psychol Psychiatry.* 2011;16(4):499-516. doi:[10.1177/1359104510378303](https://doi.org/10.1177/1359104510378303)

<sup>13</sup> Kaltiala-Heino R, Bergman H, Työlajärvi M, Frisen L. Gender dysphoria in adolescence: current perspectives. *AHMT.* 2018;Volume 9:31-41. doi:[10.2147/AHMT.S135432](https://doi.org/10.2147/AHMT.S135432)

i. Childhood-onset gender dysphoria typically remits naturally

42. To date, the total of 11 studies have been conducted to determine the trajectories of children with early-childhood onset of gender dysphoria. All 11 demonstrated that for a majority of such children (61%-98%), early childhood-onset gender dysphoria resolves without any interventions by late adolescence or young adulthood.<sup>14, 15,16</sup>

43. Proponents of pediatric “gender-affirmation” reject this proven high rate of desistance. The fact that desistance happens so frequently in gender-dysphoric children is a threat to the premise of pediatric gender transition. In fact, the expert witnesses for the plaintiffs go to great lengths to preemptively discredit the statistic.

44. For example, Dr. Hawkins attempts to discredit the overwhelming evidence that pediatric gender dysphoria typically self-resolves by claiming that the prior studies dealt with merely gender-non-conforming “non-transgender children,” rather than “true transgender children.” Hawkins says, “*Historically, earlier studies included a wide range of gender nonconforming children, rather than differentiating between transgender and non-transgender children, and also suffered from other serious methodological flaws that make them unreliable.*” (Hawkins, para 22)

45. This claim is not credible at face value. The studies in question have been authored by the very same researchers who are their countries’ respective leaders in pediatric gender

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<sup>14</sup> Cantor JM. Transgender and Gender Diverse Children and Adolescents: Fact-Checking of AAP Policy. *Journal of Sex & Marital Therapy*. 2020;46(4):307-313. doi:[10.1080/0092623X.2019.1698481](https://doi.org/10.1080/0092623X.2019.1698481)

<sup>15</sup> Ristori J, Steensma TD. Gender dysphoria in childhood. *International Review of Psychiatry*. 2016;28(1):13-20. doi:[10.3109/09540261.2015.1115754](https://doi.org/10.3109/09540261.2015.1115754)

<sup>16</sup> Singh D, Bradley SJ, Zucker KJ. A Follow-Up Study of Boys With Gender Identity Disorder. *Front Psychiatry*. 2021;12. doi:[10.3389/fpsy.2021.632784](https://doi.org/10.3389/fpsy.2021.632784)

transition. These are the very same authors who have produced much of the currently available literature upon which the entire field of pediatric gender transition rests. To suggest that these clinicians and researchers were somehow confused about their own study subjects, and accidentally studied children who were merely “tomboy girls” or “feminine boys,” rather than children with significant gender identity issues, is to imply that the entire body of evidence in the field of pediatric gender medicine came from highly confused clinicians and researchers.

46. Hawken’s argument is not original—the proponents of pediatric gender transition have been making it for some time. In response to their critique, a prominent researcher in the field of pediatric gender medicine, Dr. Ken Zucker, re-analyzed the studies in question and split the study subjects into two cohorts: those who were extremely gender non-conforming but did not meet the full diagnostic criteria for Gender Identity Disorder (which was the name of the respective DSM diagnosis at the time), and those who actually met the full diagnostic criteria for having Gender Identity Disorder.

47. The reanalysis confirmed the original finding that most children diagnosed with a gender issue per DSM—nearly 7 in 10—naturally stopped identifying as transgender by the time they reached adulthood. The rate of natural resolution for gender dysphoria is even higher, more than 9 in 10, for those who gender distress was significant enough to warrant a consult with a pediatric gender clinic, but not enough to meet the full diagnostic DSM criteria.<sup>17</sup>

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<sup>17</sup> Zucker KJ. The myth of persistence: Response to “A critical commentary on follow-up studies and ‘desistance’ theories about transgender and gender non-conforming children” by Temple Newhook et al. (2018). *International Journal of Transgenderism*. 2018;19(2):231-245. doi:[10.1080/15532739.2018.1468293](https://doi.org/10.1080/15532739.2018.1468293)

48. Yet another way that pro-transition activists have tried to discredit the well-established fact that childhood gender dysphoria eventually remits, is by claiming that DSM-IV criteria used at the time were so flawed as to be totally invalid. These claims assert that even those properly diagnosed with “Gender Identity Disorder” in DSM-IV were not “transgender” at all, but were merely gender-non-conforming.
49. While it is true that the updated DSM-5 criteria in use today made some changes to the childhood diagnosis, these changes have proven to be minor and not clinically significant. Both of the diagnostic manuals (the prior DSM-IV and the current DSM-5) were recently field-tested and were found to be equivalent in terms of which children they flagged as meeting the diagnostic criteria:<sup>18</sup>

*“...both editions (DSM-IV and DSM-5 and ICD-10 and ICD-11) of gender identity-related diagnoses seem reliable and convenient for clinical use.”*

50. The Chair of the DSM-5 Work Group for Sexual and Gender Identity Disorders also concurs that the change in the diagnostic criteria for children from DSM-IV to DSM-5 was not significant:<sup>19</sup>

*“It is my clinical opinion that the similarities across the various iterations of the DSM are far greater than the differences (Zucker, 2010) and, as part of the work done by the Subcommittee on Gender Identity Disorders for the DSM-IV, provided one example of this (Zucker et al., 1998)*

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<sup>18</sup> de Vries ALC, Beek TF, Dhondt K, et al. Reliability and Clinical Utility of Gender Identity-Related Diagnoses: Comparisons Between the ICD-11, ICD-10, DSM-IV, and DSM-5. *LGBT Health*. 2021;8(2):133-142. P.1 doi:[10.1089/lgbt.2020.0272](https://doi.org/10.1089/lgbt.2020.0272)

<sup>19</sup> Zucker KJ. The myth of persistence: Response to “A critical commentary on follow-up studies and ‘desistance’ theories about transgender and gender non-conforming children” by Temple Newhook et al. (2018). *International Journal of Transgenderism*. 2018;19(2):231-245. doi:[10.1080/15532739.2018.1468293](https://doi.org/10.1080/15532739.2018.1468293)

51. Thus, the argument that the high desistance rates of pediatric gender dysphoria recorded in all the studies to date were due to the mistaken inclusion of merely gender-non-conforming, rather than “truly transgender” children, does not hold up. It is undeniable that most gender dysphoric children will not grow up to be transgender identified adults, as long as they are allowed to naturally develop without undergoing social and medical transition.

52. Further, contrary to the unfounded plaintiff expert witnesses’ claims, no clinician can accurately predict which of the trans-identified children will continue to identify as transgender in mature adulthood vs. those that will desist. This is recognized by the seminal study evaluating the development trajectories of gender-distressed children.<sup>20</sup>

*“When considering the development of children with GD [gender dysphoria]; studies show that gender dysphoric feelings eventually desist for the majority of children with GD, and that their psychosexual outcome is strongly associated with a lesbian, gay, or bisexual sexuality which does not require any medical intervention, instead of an outcome where medical intervention is required (e.g. Drummond et al., 2008; Wallien & Cohen-Kettenis, 2008; Singh, 2012). Factors predictive for the persistence of GD have been identified on a group level, with higher intensity of GD in childhood identified as the strongest predictor for a future gender dysphoric outcome (Steensma et al., 2013). **The predictive value of the identified factors for persistence are, however, on an individual level less clear cut, and the clinical utility of currently identified factors is low**” (Ristori and Steensma, 2016, p. 6)*

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<sup>20</sup> Ristori J, Steensma TD. Gender dysphoria in childhood. *International Review of Psychiatry*. 2016;28(1):13-20. doi:[10.3109/09540261.2015.1115754](https://doi.org/10.3109/09540261.2015.1115754)



53. This very inability to predict who will persist vs. desist raises serious ethical questions regarding the provision of any irreversible procedures, and particularly those that result in sterilization.

54. The common claim by medicalization activists that once a gender-dysphoric minor reaches adolescence, their gender identity is fixed, is not supported by the evidence. In the 11 desistance studies, the age at which the subjects were followed ranged from adolescence into young adulthood. Some desisted in puberty and others in young adulthood. The Endocrine Society's treatment guidelines acknowledge this:<sup>21</sup>

*"With current knowledge, we cannot predict the psychosexual outcome for any specific child. Prospective follow-up studies show that childhood GD/gender incongruence does not invariably persist into adolescence **and adulthood** (so-called "desisters"). (Hembree et al., 2017, p. 3876)*

ii. Transgender identity in adolescents has an unknown developmental trajectory, but high rates of mutability are increasingly evident

55. It is now well recognized that a new variant of transgender identity emerged in the mid 2015's, represented by young people who were not cross-sex identified in childhood. Such cases were virtually unseen until about 7-10 years ago. This is the very population I, and many of my colleagues in the US and internationally, are now seeing in our practices. If one can develop a transgender identity for the first time in adolescence, it demonstrates that a transgender identity is not fixed.

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<sup>21</sup> Hembree WC, Cohen-Kettenis PT, Gooren L, et al. ENDOCRINE TREATMENT OF GENDER-DYSPHORIC/GENDER-INCONGRUENT PERSONS: AN ENDOCRINE SOCIETY CLINICAL PRACTICE GUIDELINE. *Endocrine Practice*. 2017;23(12):1437-1437. doi:[10.4158/1934-2403-23.12.1437](https://doi.org/10.4158/1934-2403-23.12.1437)

56. The UK has one of the biggest pediatric gender clinics in the world. The UK clinicians made this observation recently regarding adolescents declaring a trans identity without any childhood history: <sup>22</sup>

*‘...some of us have informally tended toward describing the phenomenon we witness as “adolescent-onset” gender dysphoria, that is, **without any notable symptom history prior to or during the early stages of puberty** (certainly nothing of clinical significance.)’*”(Hutchinson et al., 2020, p. 1)

57. The lead researcher for the Finnish national pediatric gender services program, one of the most respected in the world, has stated the following: <sup>23</sup>

*“In Finland most adolescents seeking medical treatment in order for their body to conform with their gender identity do not fulfil the eligibility criteria ... for example because they initially **experienced onset of gender dysphoria in the late stages of pubertal development** or suffer from severe mental disorders which predate the onset of gender dysphoria. Research on adolescent onset gender dysphoria is scarce, and optimal treatment options have not been established [12]. The reasons for the sudden increase in treatment-seeking due to **adolescent onset gender dysphoria** / transgender identification are not known [13]”* (Kaltiala-Heino and Lindberg, 2019, p. 62)

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<sup>22</sup> Hutchinson A, Midgen M, Spiliadis A. In Support of Research Into Rapid-Onset Gender Dysphoria. *Arch Sex Behav.* 2020;49(1):79-80. p.1 doi:[10.1007/s10508-019-01517-9](https://doi.org/10.1007/s10508-019-01517-9)

<sup>23</sup> Kaltiala-Heino R, Lindberg N. Gender identities in adolescent population: Methodological issues and prevalence across age groups. *Eur psychiatr.* 2019;55:61-66. p.62 doi:[10.1016/j.eurpsy.2018.09.003](https://doi.org/10.1016/j.eurpsy.2018.09.003)

58. A leading Canadian pediatric gender expert made a similar observation: <sup>24</sup>

*“.. it is my view (and that of others) that a new subgroup of adolescents with gender dysphoria has appeared on the clinical scene. This subgroup appears to be comprised—at least so far—of a disproportionate percentage of birth-assigned females **who do not have a history of gender dysphoria in childhood or even evidence of marked gender-variant or gender nonconforming behavior.**”* (Zucker, 2019, p. 4)

59. Last but not least, even the principal investigator of the medical protocol for transitioning minors (known as the Dutch Protocol) recently acknowledged that a fundamental shift has occurred where adolescents are “coming out” with a trans identity around puberty:<sup>25</sup>

*“... gender identity development is diverse, and a new developmental pathway is proposed involving youth with postpuberty **adolescent-onset transgender histories.**6–8 These youth did not yet participate in the early evaluation studies.5,9”* (de Vries, 2020, p. 1)

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<sup>24</sup> Zucker KJ. Adolescents with Gender Dysphoria: Reflections on Some Contemporary Clinical and Research Issues. *Arch Sex Behav.* 2019;48(7):1983-1992. doi:[10.1007/s10508-019-01518-8](https://doi.org/10.1007/s10508-019-01518-8)

<sup>25</sup> de Vries ALC. Challenges in Timing Puberty Suppression for Gender-Nonconforming Adolescents. *Pediatrics.* 2020;146(4):e2020010611. doi:[10.1542/peds.2020-010611](https://doi.org/10.1542/peds.2020-010611)

60. Finally, the growing visibility of young adult detransitioners confirms that a transgender identity can desist in young people.<sup>26, 27, 28, 29</sup>
61. A recent study from a UK adult gender clinic showed that over 10% of young people treated with gender-affirmative interventions detransitioned within 16 months of starting treatment. Another 22% of patients disengaged from the clinic without completing their treatment plan.<sup>30</sup>
62. Another clinic population study found that over 12% of those who had started hormonal treatments either detransitioned or documented regret, while 20% stopped the treatments for a wider range of reasons. These patients presented to the clinics as young adults (mean age of 20) and it took them on average 5 years from beginning treatment to stopping it. Notably, the UK researchers said this:<sup>31</sup>

*“Thus, the detransition rate found in this population is novel and questions may be raised about the phenomenon of overdiagnosis, overtreatment, or iatrogenic harm as found in other medical fields.” (Boyd et al., 2021, p.12)*

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<sup>26</sup> Entwistle K. Debate: Reality check – Detransitioners’ testimonies require us to rethink gender dysphoria. *Child Adolesc Ment Health*. Published online May 14, 2020:camh.12380. doi:[10.1111/camh.12380](https://doi.org/10.1111/camh.12380)

<sup>27</sup> Littman L. Individuals Treated for Gender Dysphoria with Medical and/or Surgical Transition Who Subsequently Detransitioned: A Survey of 100 Detransitioners. *Arch Sex Behav*. Published online October 19, 2021. doi:[10.1007/s10508-021-02163-w](https://doi.org/10.1007/s10508-021-02163-w)

<sup>28</sup> Levine SB, Abbruzzese E, Mason JM. Reconsidering Informed Consent for Trans-Identified Children, Adolescents, and Young Adults. *Journal of Sex & Marital Therapy*. Published online March 17, 2022:1-22. doi:[10.1080/0092623X.2022.2046221](https://doi.org/10.1080/0092623X.2022.2046221)

<sup>29</sup> Vandebussche E. Detransition-Related Needs and Support: A Cross-Sectional Online Survey. *Journal of Homosexuality*. Published online April 30, 2021:20. doi:[10.1080/00918369.2021.1919479](https://doi.org/10.1080/00918369.2021.1919479)

<sup>30</sup> Hall R, Mitchell L, Sachdeva J. Access to care and frequency of detransition among a cohort discharged by a UK national adult gender identity clinic: retrospective case-note review. *BJPsych open*. 2021;7(6):e184. doi:[10.1192/bjo.2021.1022](https://doi.org/10.1192/bjo.2021.1022)

<sup>31</sup> Boyd IL, Hackett T, Bewley S. Care of Transgender Patients: A General Practice Quality Improvement Approach. *SSRN Journal*. Published online 2021. p. 12 doi:[10.3390/healthcare10010121](https://doi.org/10.3390/healthcare10010121)

63. Further, we have direct evidence that adolescents with a transgender identity who desire to undergo medical interventions but are told to wait will likely desist. While the studies into this subject are scarce, in the early 2000's Dutch researchers (who pioneered the practice of pediatric gender transition) followed 14 adolescents who were rejected from hormonal and surgical interventions due to presenting with co-morbid mental health issues.<sup>32</sup>
64. At follow-up when the subjects were in their 20's, approximately 1-7 years after being rejected from medical transition as minors, the researchers discovered that 11 of 14 cases no longer wished to transition at all, two subjects only slightly regretted not being able to transition, and only one subject continued to strongly wish to transition. This single subject only wanted breast augmentation, but no other surgery in order to preserve sexual function.<sup>33</sup> Had that one individual been transitioned as a minor under the Dutch protocol, the loss of fertility and sexual function would have ensued.
65. Thus, all 14 of the 14 who were rejected from gender reassignment as teens benefitted from the intervention being delayed until they reached mature adulthood. These 14 young adults simultaneously prove three things: (i) Desistance frequently occurs. (ii) Desistance occurs even when gender dysphoria persists into adolescence. And (iii) a transgender identity is not immutable.

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<sup>32</sup> Smith YLS, Van Goozen SHM, Cohen-Kettenis PT. Adolescents With Gender Identity Disorder Who Were Accepted or Rejected for Sex Reassignment Surgery: A Prospective Follow-up Study. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2001;40(4):472-481. doi:[10.1097/00004583-200104000-00017](https://doi.org/10.1097/00004583-200104000-00017)

<sup>33</sup> Malone W, D'Angelo R, Beck S, Mason J, Evans M. Puberty blockers for gender dysphoria: the science is far from settled. *The Lancet Child & Adolescent Health*. 2021;5(9):e33-e34. doi:[10.1016/S2352-4642\(21\)00235-2](https://doi.org/10.1016/S2352-4642(21)00235-2)

iii. The terms “transgender child” or “transgender adolescent” are poorly defined

66. Precisely because no clinician can reliably predict which young person will desist from their transgender identification vs. who will persist, the notion of a “transgender child/adolescent” extensively used by the plaintiff’s witnesses is not a valid one.

67. “Transgender” is not a diagnosis found in any of the existing diagnostic classifications (either DSM or ICD). It’s a lay term that has a wide range of definitions that vary depending on each person’s unique understanding of this phenomenon.

68. I maintain that the use of the adjective “transgender” by the plaintiffs’ expert witnesses, whenever they talk about gender-dysphoric youth, aims to create an emotional response, implies immutability not supported by evidence, and generally does not belong in a legal document dealing with medical interventions as it lacks a clinical definition. The proper terms in medical contexts are “gender-dysphoric” or “diagnosed with gender dysphoria,” based on the diagnostic DSM-5 criteria that are currently in use in the United States.

### C. The original research on which the practice of pediatric transition rests no longer applies to the currently presenting cases

i. The Protocol for gender-transitioning minors suffers from serious problems.

69. The practice of pediatric gender transition, known as “gender-affirmative care,” rests on a single experiment from the Netherlands conducted circa 2010. This small, single-site, uncontrolled experiment showed that carefully selecting only the highest-functioning children with no mental health problems aside, from being cross-sex identified from early childhood on, and providing them with puberty blockers and cross-sex hormones upon reaching mid-adolescence, followed by surgeries after reaching the 18<sup>th</sup> birthday, allows

these children to continue to be high-functioning approximately 1.5 years after the completion of final surgery.<sup>34,35</sup>

70. However, the only attempt to replicate the Dutch experiment outside the Netherlands, in the world's largest gender clinic in the UK, failed to show any positive outcomes of the first phase of the Dutch protocol (puberty blockers).<sup>36</sup> The latter phases of the Dutch protocol (following puberty blockers with cross-sex hormones and surgery) have never been attempted to be replicated.

71. Further, new information came into light recently that suggests that the Dutch experiment was both misunderstood and misrepresented as providing "proof" that gender reassignment for minors leads to successful outcomes, when in fact, the study's conclusions are highly questionable. For example, while the Dutch researchers took credit for the adolescents' high level of functioning after transition, these adolescents were high functioning before transition due to the study's stringent participant selection criteria.

72. In fact, for half of the psychological measures tracked, there were no statistically significant improvements before vs. after the treatment protocol. The positive changes in the rest of the psychological measures were so small as to be of highly questionable clinical significance,

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<sup>34</sup> de Vries ALC, Steensma TD, Doreleijers TAH, Cohen-Kettenis PT. Puberty Suppression in Adolescents With Gender Identity Disorder: A Prospective Follow-Up Study. *The Journal of Sexual Medicine*. 2011;8(8):2276-2283. doi:[10.1111/j.1743-6109.2010.01943.x](https://doi.org/10.1111/j.1743-6109.2010.01943.x)

<sup>35</sup> de Vries ALC, McGuire JK, Steensma TD, Wagenaar ECF, Doreleijers TAH, Cohen-Kettenis PT. Young Adult Psychological Outcome After Puberty Suppression and Gender Reassignment. *Pediatrics*. 2014;134(4):696-704. doi:[10.1542/peds.2013-2958](https://doi.org/10.1542/peds.2013-2958)

<sup>36</sup> Carmichael P, Butler G, Masic U, et al. Short-term outcomes of pubertal suppression in a selected cohort of 12 to 15 year old young people with persistent gender dysphoria in the UK. Santana GL, ed. *PLoS ONE*. 2021;16(2):e0243894. doi:[10.1371/journal.pone.0243894](https://doi.org/10.1371/journal.pone.0243894)

and could not be attributed to the hormones and surgeries alone since all the subjects also received extensive psychological support.<sup>37</sup>

73. More generally, the lack of a control group rendered the study findings “very low certainty,” the rating assigned to the study by the recent comprehensive systematic review of evidence conducted by the UK’s National Institute for Health and Care Excellence (NICE).<sup>38</sup>

74. Even the study’s most-lauded finding, the marked drop in the “gender dysphoria” score, is now in question, as it has come to light that the researchers did not have an appropriate scale to capture changes in gender dysphoria, and they used the scale that they did have access to in a highly questionable way (by “flipping” the male and female versions of the scales between baseline and final measurement time periods).<sup>39</sup>

75. Further, the Dutch team had very strict screening criteria, which would have excluded the vast majority of young people who request gender reassignment today. For example, the Dutch excluded from their experiment any adolescent whose transgender identity emerged only around and after puberty—they required that clear cross-sex identification be present from very early childhood on. The Dutch also excluded the adolescents who were suicidal or had any significant unaddressed mental illness. Adolescents with a non-binary identity were not eligible. In addition, the Dutch researchers insisted that the adolescents have a firm grasp

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<sup>37</sup> See Levine, 2020

<sup>38</sup> National Institute for Health and Care Excellence. Evidence review: Gonadotrophin releasing hormone analogues for children and adolescents with gender dysphoria.  
<https://web.archive.org/web/20220414202655/https://arms.nice.org.uk/resources/hub/1070905/attachment>

<sup>39</sup> See Levine, 2020



of biological reality and realize they will never be able to become the “opposite sex” despite the hormonal and surgical interventions.<sup>40, 41</sup>

76. Several children in the small sample of 70 cases (which, by the end of the study, shrank to 55) experienced severe adverse events while under treatment, including one young adult who died followed surgical complications, several cases of new diabetes and obesity, and at least one case of detransition, although the study is vague on this point.<sup>42</sup>
77. This study, and the modest psychological improvements reported, came at the cost of sterility for 100% of the subjects (mandatory removal of ovaries and testes was part of the protocol), and were associated with severe adverse, raising serious ethical concerns that I will address later on in more detail.
78. The concern that I would like to focus on here is that the presentation of gender dysphoria in youth has markedly changed since the Dutch protocol’s final results were published in 2014. As a result, the continued application of this protocol to the populations for which it was never intended in the first place is not justified under any circumstances. This misapplication of the Dutch protocol directly contradicts the principle of evidence-based medicine.

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<sup>40</sup> Delemarre-van de Waal HA, Cohen-Kettenis PT. Clinical management of gender identity disorder in adolescents: a protocol on psychological and paediatric endocrinology aspects. *eur j endocrinol*. 2006;155(suppl\_1):S131-S137. doi:[10.1530/eje.1.02231](https://doi.org/10.1530/eje.1.02231)

<sup>41</sup> Cohen-Kettenis PT, Delemarre-van de Waal HA, Gooren LJG. The treatment of adolescent transsexuals: changing insights. *J Sex Med*. 2008;5(8):1892-1897. doi:[10.1111/j.1743-6109.2008.00870.x](https://doi.org/10.1111/j.1743-6109.2008.00870.x)

<sup>42</sup> See de Vries et al., 2014

- ii. The vast majority of currently presenting cases of gender dysphoric youth no longer meet the strict criteria of the Dutch protocol

79. Currently, approximately 2%-9% of minors in the US identify as transgender.<sup>43,44</sup> Most are adolescent females who “came out” as transgender around the time of puberty, and very often have significant mental health comorbidities that pre-date the onset of transgender identity.<sup>45, 46, 47</sup> Increasingly, these minors are identifying as “non-binary”: neither male nor female, or both as male and female.<sup>48</sup> Recent research estimates that as many as 67% of trans-identified adolescents today identify as non-binary.<sup>49</sup>

80. The new clinical presentation and skyrocketing numbers are totally new phenomena. As recently as eight or ten years ago, seeing a child with a cross-gender identity was extremely rare, and most were prepubescent boys, the majority of whom outgrew their trans

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<sup>43</sup> Johns MM, Lowry R, Andrzejewski J, et al. Transgender Identity and Experiences of Violence Victimization, Substance Use, Suicide Risk, and Sexual Risk Behaviors Among High School Students - 19 States and Large Urban School Districts, 2017. *MMWR Morb Mortal Wkly Rep*. 2019;68(3):67-71. doi:[10.15585/mmwr.mm6803a3](https://doi.org/10.15585/mmwr.mm6803a3)

<sup>44</sup> Kidd KM, Sequeira GM, Douglas C, et al. Prevalence of Gender-Diverse Youth in an Urban School District. *Pediatrics*. 2021;147(6):e2020049823. doi:[10.1542/peds.2020-049823](https://doi.org/10.1542/peds.2020-049823)

<sup>45</sup> Becerra-Culqui TA, Liu Y, Nash R, et al. Mental Health of Transgender and Gender Nonconforming Youth Compared With Their Peers. *Pediatrics*. 2018;141(5):e20173845. doi:[10.1542/peds.2017-3845](https://doi.org/10.1542/peds.2017-3845)

<sup>46</sup> Kaltiala-Heino R, Sumia M, Työläjärvä M, Lindberg N. Two years of gender identity service for minors: overrepresentation of natal girls with severe problems in adolescent development. *Child Adolesc Psychiatry Ment Health*. 2015;9(1):9. doi:[10.1186/s13034-015-0042-y](https://doi.org/10.1186/s13034-015-0042-y)

<sup>47</sup> Kaltiala-Heino R, Lindberg N. Gender identities in adolescent population: Methodological issues and prevalence across age groups. *Eur psychiatr*. 2019;55:61-66. doi:[10.1016/j.eurpsy.2018.09.003](https://doi.org/10.1016/j.eurpsy.2018.09.003)

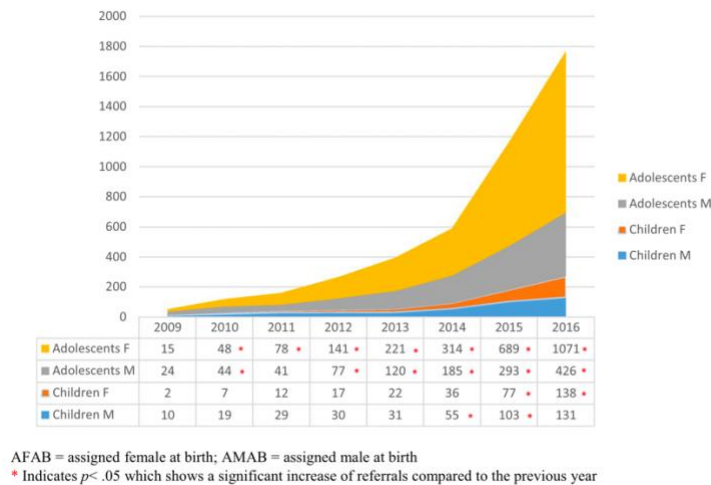
<sup>48</sup> Chew D, Tollit MA, Poulakis Z, Zwickl S, Cheung AS, Pang KC. Youths with a non-binary gender identity: a review of their sociodemographic and clinical profile. *The Lancet Child & Adolescent Health*. 2020;4(4):322-330. doi:[10.1016/S2352-4642\(19\)30403-1](https://doi.org/10.1016/S2352-4642(19)30403-1)

<sup>49</sup> Green AE, DeChants JP, Price MN, Davis CK. Association of Gender-Affirming Hormone Therapy With Depression, Thoughts of Suicide, and Attempted Suicide Among Transgender and Nonbinary Youth. *Journal of Adolescent Health*. Published online December 2021:S1054139X21005681. doi:[10.1016/j.jadohealth.2021.10.036](https://doi.org/10.1016/j.jadohealth.2021.10.036)

identification sometime before mature adulthood. Many of these youths grew up to be gay.<sup>50</sup>

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81. The graph shown here from the Gender Identity Service in England is but one example of this worldwide phenomenon.<sup>52</sup>



82. In my own practice, I am also struck by the similarities in the patient stories of trans-identified youth. Most are adolescent females who have had a normative childhood from the gender standpoint, but have felt isolated from their peers. They have had pre-existing anxiety and depression. Several have had a history of psychiatric hospitalizations.

83. What is particularly striking is that that my patients arrive at my office well-versed in gender-related terminology. The trans-identified youth I see use terms that I did not expect to hear from late elementary, middle school, and high school students. Without prompting or questioning, I often hear about self-diagnoses of depression, anxiety, PTSD, autism, and

<sup>50</sup> See Cantor, 2020, Appendix

<sup>51</sup> See Korte, 2008

<sup>52</sup> de Graaf NM, Giovanardi G, Zitz C, Carmichael P. Sex Ratio in Children and Adolescents Referred to the Gender Identity Development Service in the UK (2009–2016). *Arch Sex Behav*. 2018;47(5):1301-1304. doi:[10.1007/s10508-018-1204-9](https://doi.org/10.1007/s10508-018-1204-9)

dissociative disorders. Terms such as *puberty blockers*, *cross sex hormones*, *fully reversible*, *partially reversible*, *irreversible*, *suicidality*, *allyship*, *misgendering*, *minority stress*, and *transphobia* are often mentioned. The patient familiarity with terminology in this field is remarkable.

84. The advocates of medicalization may celebrate this as patient empowerment and patient education. To me this suggests a heavy influence from others. These youth self-diagnose and arrive in my office certain of their condition and the need for treatment, which is usually a request for hormones.
85. The emergence of a new clinical entity, and to an unprecedented scale, would normally give us pause. A pause to better understand what's causing the exponential rise in gender dysphoria and how best to understand it and address it. Several national health systems in progressive countries have indeed done this very thing. They include Finland, Sweden, and the UK, all of which have recently conducted systematic reviews of evidence and have begun to sharply limit pediatric transition over the concerns about this new trend.
86. Instead of a pause and critical analysis of the situation, as other countries are now doing, the US presses on, oblivious to these changes, and even actively suppressing concerns. The researcher who first raised the key question of why suddenly so many teenagers, and especially females with pre-existing mental health problems, are declaring a trans identity and seeking "gender-affirming" hormones, and hypothesized that peer pressure and social influence may be playing a key role, has been subject to intimidation, abuse, and silencing.<sup>53</sup>
87. It should also be noted that we are currently experiencing a well-recognized and new phenomenon of high numbers of children, particularly adolescent females, developing the

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<sup>53</sup> <https://quillette.com/2018/08/31/as-a-former-dean-of-harvard-medical-school-i-question-browns-failure-to-defend-lisa-littman/>

sudden onset of tics that has been tied to social contagion via social networks.<sup>54</sup> Other well-researched socially-mediated psychological phenomena are eating disorders. It is known that bulimia and anorexia can spread through human social networks. These human social networks existed prior to the internet, can spread these conditions, and have disproportionately affected adolescent females.<sup>55,56</sup>

88. I am not asserting that adolescent-onset gender dysphoria spreads through social circles or is socially contagious—however this hypothesis and others need to be investigated. It is reasonable and prudent to ask why this is happening—as many as 1 in 10 youth currently claim a transgender identity —before a growing number of children are subjected to irreversible and highly experimental medical interventions.<sup>57</sup>

#### D. There is no established standard of care for transgender-identified youth

##### i. Current treatment guidelines do not represent a standard of care

89. Contrary to the plaintiffs' expert reports, there is currently no established standard of care for transgender-identified youth. Instead, multiple professional societies have come up with various treatment guidelines which are increasingly divergent in terms of how to approach the management of gender dysphoria in youth.

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<sup>54</sup> <https://ipmh.duke.edu/news/pediatric-presentation-tics-potential-role-tiktok>

<sup>55</sup> Allison S, Warin M, Bastiampillai T. Anorexia nervosa and social contagion: Clinical implications. *Aust N Z J Psychiatry*. 2014;48(2):116-120. doi:[10.1177/0004867413502092](https://doi.org/10.1177/0004867413502092)

<sup>56</sup> Forman-Hoffman VL, Cunningham CL. Geographical clustering of eating disordered behaviors in U.S. high school students. *Int J Eat Disord*. 2008;41(3):209-214. doi:[10.1002/eat.20491](https://doi.org/10.1002/eat.20491)

<sup>57</sup> Littman L. Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria. Romer D, ed. *PLoS ONE*. 2018;13(8):e0202330. doi:[10.1371/journal.pone.0202330](https://doi.org/10.1371/journal.pone.0202330)

90. Unlike standards of care, which should be authoritative, unbiased consensus positions designed to produce optimal outcomes, practice guidelines are suggestions or recommendations. Depending on their sponsor, practice guidelines may be biased.<sup>58</sup>
91. The World Professional Association for Transgender Health (WPATH), an advocacy organization with a mission to remove barriers to insurance coverage for “gender-affirming” hormones and surgeries, is one of several organizations that authors guidelines in this space. Although WPATH named its guidelines “Standards of Care,” it recently had to acknowledge that their recommendations are merely practice guidelines, rather than standards of care.<sup>59</sup>
92. The “Standards of Care 7” acknowledges that it was not evidence-based and did not utilize any systematic reviews of evidence, but rather was based on the emerging cultural changes and expert opinions of clinicians, many of whom derive a significant proportion of their income from delivering transgender medicine. A recent systematic review of treatment guidelines in this space found that “Standards of Care 7” were generally unfit for clinical decision-making, and it described several recommendations in the document as incoherent.<sup>60</sup>
93. The upcoming “Standards of Care 8” have not yet been finalized, but the draft version signals even more aggressive lowering of age of eligibility for hormonal and surgical interventions than that found in “Standards of Care 7,” clearly signaling that the values and preferences of

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<sup>58</sup> Malone WJ, Hruz PW, Mason JW, Beck S. Letter to the Editor from William J. Malone et al: “Proper Care of Transgender and Gender-diverse Persons in the Setting of Proposed Discrimination: A Policy Perspective.” *The Journal of Clinical Endocrinology & Metabolism*. Published online March 27, 2021:dgab205. doi:[10.1210/clinem/dgab205](https://doi.org/10.1210/clinem/dgab205)

<sup>59</sup> See Malone et al., 2021

<sup>60</sup> Dahlen S, Connolly D, Arif I, Junejo MH, Bewley S, Meads C. International clinical practice guidelines for gender minority/trans people: systematic review and quality assessment. *BMJ Open*. 2021;11(4):e048943. doi:[10.1136/bmjopen-2021-048943](https://doi.org/10.1136/bmjopen-2021-048943)

WPATH clinicians are strongly aligned with medicalization even when the evidence for it is low-quality and non-existent entirely.

94. Another guideline that the plaintiffs' expert witnesses erroneously cite as representing the standard of care is that by the Endocrine Society. However, the Endocrine Society's guidelines clearly state:<sup>61</sup>

*"...the guidelines cannot guarantee any specific outcome, nor do they establish a standard of care."* (Hembree et al., 2017, p. 3895)

95. The Endocrine Society's recommendation to halt gender dysphoric minors' puberty and treat them with cross-sex hormones is rated as "weak," and is recognized as coming from low quality evidence by the guidelines itself.<sup>62</sup> The "weak" grading indicates that it is not known whether the benefits outweigh the risks.

96. Notably, the only studies cited in the two key recommendations to treat minors hormonally are the two Dutch studies I described earlier.<sup>63</sup> Thus, the entire foundation of the Endocrine Society's recommendations to medically intervene with gender-dysphoric minors comes from a single small-scale experiment with significant problems, as described earlier.

ii. The National Institutes of Health (NIH)-funded research acknowledges that little is known about pediatric gender transition

97. According to the research protocol filed by the researchers for a recent NIH grant, the data on pediatric gender transitions are almost entirely lacking. The need to conduct this research

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<sup>61</sup> See Hembree et al., 2017

<sup>62</sup> See Hembree et al., 2017

<sup>63</sup> See de Vries et al., 2011 and de Vries et al., 2014

demonstrates that this care pathway remains largely experimental, with an unknown risk-benefit ratio.<sup>64</sup>

98. The following quotes from the NIH grant from 2019 clearly demonstrate how immature the field of pediatric gender medicine is:<sup>65</sup>

- *“Although the Endocrine Society Clinical Practice Guidelines are widely adopted by providers around the United States and worldwide, there are no formal empirical studies of related clinical outcomes in transgender children and adolescents.”*
- *“...existing models of care for transgender youth...have been used in clinical settings for close to a decade, although with limited empirical research to support them”*
- *“Although these [current clinical practice] guidelines have informed care at academic and community centers across the United States, they are based on very limited data. Furthermore, there is minimal available data examining the long-term physiologic and metabolic consequences of gender-affirming hormone treatment in youth. This represents a critical gap in knowledge that has significant implications for clinical practice across the United States.”*
- *“The gap in existing knowledge about the impact of these practices leaves providers and caretakers uncertain about moving forward with the recommended medical interventions for transgender youth seeking phenotypic transition.”*

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<sup>64</sup> Olson-Kennedy J, Chan YM, Garofalo R, et al. Impact of Early Medical Treatment for Transgender Youth: Protocol for the Longitudinal, Observational Trans Youth Care Study. *JMIR Res Protoc.* 2019;8(7):e14434. doi:[10.2196/14434](https://doi.org/10.2196/14434)

<sup>65</sup> See Olson-Kennedy et al., 2019



99. These quotes, and the substantial amount of money paid by the NIH to fund this research, clearly demonstrate that “gender-affirmative” interventions are still in the experimental stage and are not yet ready to be deemed either “safe” or “effective.”

100. When there is no data of the benefits, and the risks are substantial, the onus is on the research community to first demonstrate that benefits outweigh the risks. Until such evidence exists, no standard of care can be claimed.

iii. The United States is increasingly becoming an outlier in its non-evidence-based stance that transitioning minors is a safe and effective practice

101. Sweden is the first country in the world to recognize the legal status of transgender adults. In May of 2021, Sweden’s flagship children’s hospital, which is affiliated with the Karolinska Institute that grants the Nobel Prize of Medicine, announced that they were discontinuing all new pediatric transitions due to concerns over the lack of efficacy and the potential for significant harm. In May 2022, Sweden’s Health Authority (National Board of Health and Welfare/NBHW) issued a country-wide policy that states that going forward, pediatric gender transitions will not be available in general medical practice to those <18. Such interventions will only be provided in strictly controlled clinical trial settings with a focus on the strictest ethical safeguards for youth, given the significant risk of harm.

102. It is noteworthy that the official English translation of Sweden’s health authority’s decision states:<sup>66</sup>

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<sup>66</sup> <https://www.socialstyrelsen.se/globalassets/sharepoint-dokument/artikelkatalog/kunskapsstod/2022-3-7799.pdf>

*“For adolescents with gender incongruence, the NBHW deems that the **risks of puberty suppressing treatment with GnRH-analogues and gender-affirming hormonal treatment currently outweigh the possible benefits...** This judgement is based mainly on three factors: the continued lack of reliable scientific evidence concerning the efficacy and the safety of both treatments, the new knowledge that detransition occurs among young adults, and the uncertainty that follows from the yet unexplained increase in the number of care seekers, an increase particularly large among adolescents registered as females at birth.”*

103. Increasingly, a number of western countries with significant experience in pediatric gender transition are turning away from WPATH and the Endocrine Society’s guidelines. In the last 24 months, not just Sweden, but also Finland, the UK, and France, after independently reviewing evidence, have issued their own guidelines that are far more conservative than the stances promoted by the US-based medical societies.<sup>67,68,69</sup>
104. However, in the US, the proponents of medical interventions of minors continue to assert that if a child on the verge of puberty, or an older adolescent meets the diagnostic criteria for gender dysphoria, then medical interventions are without question “medically necessary.”
105. This confidence by US clinicians extends to medical interventions for “non-binary” youth who are an even less well-understood population. Procedures viewed as “medically necessary” by some of the proponents of “gender-affirmative care” for minors now include

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<sup>67</sup> [https://segm.org/Finland\\_deviates\\_from\\_WPATH\\_prioritizing\\_psychotherapy\\_no\\_surgery\\_for\\_minors](https://segm.org/Finland_deviates_from_WPATH_prioritizing_psychotherapy_no_surgery_for_minors)

<sup>68</sup> <https://cass.independent-review.uk/publications/interim-report/>

<sup>69</sup> <https://segm.org/France-cautions-regarding-puberty-blockers-and-cross-sex-hormones-for-youth>

the suppression of puberty indefinitely in order to present as an ambiguous sex,<sup>70,71</sup> mastectomy on youth as young as 13 years of age,<sup>72</sup> and “non-binary” breast surgeries that preserve a feminine appearance while changing the placement of the nipples to be more reminiscent of a male chest, should the minor’s identity reside somewhere along the “male to female spectrum.”<sup>73</sup>

106. It is my belief that the highly politicized nature of the US debate about transgender healthcare has pushed our country toward an increasingly pro-medicalization position, at the same time the rest of the world is making a U-turn. The failure of the US-based medical societies to recognize the harms that are currently occurring to vulnerable minors is hard to understand, and raises serious ethical questions.

#### **IV. Ethical Considerations and Conclusions**

107. Medical ethics rests on four key pillars: the principles of patient autonomy, justice, beneficence, and nonmaleficence.<sup>74</sup> It is my belief as a bioethicist that providing youth with hormones and surgeries directly violates all of these principles. For this reason, it is my belief that true informed consent to “gender-affirming” hormones and surgeries for minors is not possible.

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<sup>70</sup> Notini L, Earp BD, Gillam L, et al. Forever young? The ethics of ongoing puberty suppression for non-binary adults. *J Med Ethics*. Published online July 24, 2020;medethics-2019-106012. doi:[10.1136/medethics-2019-106012](https://doi.org/10.1136/medethics-2019-106012)

<sup>71</sup> Pang KC, Notini L, McDougall R, et al. Long-term Puberty Suppression for a Nonbinary Teenager. *Pediatrics*. 2020;145(2):e20191606. doi:[10.1542/peds.2019-1606](https://doi.org/10.1542/peds.2019-1606)

<sup>72</sup> Olson-Kennedy J, Warus J, Okonta V, Belzer M, Clark LF. Chest Reconstruction and Chest Dysphoria in Transmasculine Minors and Young Adults: Comparisons of Nonsurgical and Postsurgical Cohorts. *JAMA Pediatr*. 2018;172(5):431. doi:[10.1001/jamapediatrics.2017.5440](https://doi.org/10.1001/jamapediatrics.2017.5440)

<sup>73</sup> <https://cranects.com/non-binary-surgery/>

<sup>74</sup> Varkey B. Principles of clinical ethics and their application to practice. *Med Princ Pract*. Published online June 4, 2020. doi:[10.1159/000509119](https://doi.org/10.1159/000509119)

A. The principle of “Patient Autonomy” is not respected when “gender-affirming” hormones and surgeries are provided to minors

108. Patient autonomy is a bedrock principle of medical ethics, having a long and well-respected history in both medical ethics and the law. In the context of providing hormones and surgeries to gender-dysphoric minors who wish for these interventions, the advocates of medical interventions are misrepresenting the nature of patient autonomy.

109. Rather than the right to *demand and receive* any treatment, patient autonomy is rightfully understood as the patient’s right to *consent to* and to *refuse* treatment. Medical care cannot be done without a valid informed consent. It cannot be provided against the patient’s will.

The court stated this clearly in *Schloendorff v Society of New York Hospital*:

*“Every human being of adult years and sound mind has a right to determine what shall be done with his own body; and a surgeon who performs an operation without his patient's consent commits an assault for which he is liable in damages.”*<sup>75</sup>

110. Patient autonomy has never meant that a patient or their guardian have the right to *demand and receive* treatment that is inappropriate or harmful. For example, pediatricians routinely decline to provide antibiotics to children with viral infections. Well-meaning and deeply concerned parents may be looking for, and even demand, antibiotics as a solution to a child’s viral illness. However, we do not prescribe antibiotics in these cases because they have no role in viral infections, carry risks to the child, and the inappropriate use of antibiotics create resistance in the community. Likewise, when worried parents implore physicians for a CT scan of their child’s head following a minor head trauma, a conscientious physician will decline such a request. There is no benefit to imaging for

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<sup>75</sup> *Schloendorff v. Society of New York Hospital*, 1914 <https://biotech.law.lsu.edu/cases/consent/schoendorff.htm>

minor head trauma and there are well-recognized risks that are not insignificant, including sedation and radiation exposure. In these cases, we are not “denying care.” We are providing the patients with appropriate medical care and safeguarding them from the risk of harm.

111. Like antibiotics for viral infections or CT scans for minor head injuries, puberty blockers, cross sex hormones, and surgeries do not have proven psychological or physical health benefits for gender-dysphoric youth. This lack of benefit has been the conclusion of recent quality systematic reviews by the UK, Sweden’s, and Finland’s public health authorities.<sup>76,77,78,79</sup> Sweden’s National Health and Welfare Board has determined that risks of gender affirming care “currently outweigh the benefits.”<sup>80</sup>
112. The medical risks of “gender-affirming” interventions are substantial. The most recent evidence shows that a gender-dysphoric child with normally timed puberty who is started on puberty blockers has a nearly 100% chance of continuing to cross-sex hormones.<sup>81,82,83</sup> This medical sequence will render the child sterile.

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<sup>76</sup> <https://web.archive.org/web/20220414202655/https://arms.nice.org.uk/resources/hub/1070905/attachment>

<sup>77</sup> <https://web.archive.org/web/20220215111922/https://arms.nice.org.uk/resources/hub/1070871/attachment>

<sup>78</sup> SBU. *Hormonbehandling Vid Könsdysfori - Barn Och Unga [Hormonal Treatment of Gender Dysphoria - Children and Adolescents]*. SBU; 2022. <https://www.sbu.se/342>

<sup>79</sup> Pasternack I, Söderström I, Saijonkari M, Mäkelä M. Lääketieteelliset menetelmät sukupuolivariaatioihin liittyvän dysforian hoidossa. Systemaattinen katsaus. [Appendix 1 Systematic Review]. Published online 2019:106. Accessed May 1, 2022. <https://app.box.com/s/y9u791np8v9gsunwgpr2kqn8swd9vdtx>

<sup>80</sup> <https://www.socialstyrelsen.se/globalassets/sharepoint-dokument/artikelkatalog/kunskapsstod/2022-3-7799.pdf>

<sup>81</sup> Wiepjes CM, Nota NM, de Blok CJM, et al. The Amsterdam Cohort of Gender Dysphoria Study (1972–2015): Trends in Prevalence, Treatment, and Regrets. *The Journal of Sexual Medicine*. 2018;15(4):582-590. doi:[10.1016/j.jsxm.2018.01.016](https://doi.org/10.1016/j.jsxm.2018.01.016)

<sup>82</sup> Carmichael P, Butler G, Masic U, et al. Short-term outcomes of pubertal suppression in a selected cohort of 12 to 15 year old young people with persistent gender dysphoria in the UK. Santana GL, ed. *PLoS ONE*. 2021;16(2):e0243894. doi:[10.1371/journal.pone.0243894](https://doi.org/10.1371/journal.pone.0243894)

<sup>83</sup> Brik T, Vrouenraets LJ, de Vries MC, Hannema SE. Trajectories of Adolescents Treated with Gonadotropin-Releasing Hormone Analogues for Gender Dysphoria. *Arch Sex Behav*. 2020;49(7):2611-2618. doi:[10.1007/s10508-020-01660-8](https://doi.org/10.1007/s10508-020-01660-8)

113. Other medical harms also ensue. These include harms to bone health, cardiovascular health, brain development, and other problems.<sup>84,85,86</sup>
114. A physician who grants a minor's wish for these interventions is not respecting patient autonomy. That physician is misusing the principle of patient autonomy to justify unethical experimentation on minors.
115. Another key ethical dilemma regarding patient autonomy is whether the wishes of the 13-year-old should be privileged over the wishes of the future adult self. Can the 13-year-old self fully and truly know what the 25-year-old self will desire regarding the questions of sexual function and reproductive rights? We do not know what the 25-year-old will say about the loss of sexual function or fertility. A price may be paid that can never be recouped, all for bodily change that may or may not comport with the 25-year-old's future identity and desires.
116. It is a well-known fact that many adult trans-identified individuals choose not to undergo "gender-affirming" procedures that threaten their sexual function. While adults chose to preserve their fertility and sexual function, children at Tanner stage 2, which can occur in females as young as 8, are asked to contemplate, decide, and then consent to treatments with puberty blockers followed by cross sex hormones, which will cause sterility. Fertility

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<sup>84</sup> Klink D, Caris M, Heijboer A, van Trotsenburg M, Rotteveel J. Bone Mass in Young Adulthood Following Gonadotropin-Releasing Hormone Analog Treatment and Cross-Sex Hormone Treatment in Adolescents With Gender Dysphoria. *The Journal of Clinical Endocrinology & Metabolism*. 2015;100(2):E270-E275. doi:[10.1210/jc.2014-2439](https://doi.org/10.1210/jc.2014-2439)

<sup>85</sup> Alzahrani T, Nguyen T, Ryan A, et al. Cardiovascular Disease Risk Factors and Myocardial Infarction in the Transgender Population. *Circ: Cardiovascular Quality and Outcomes*. 2019;12(4). doi:[10.1161/CIRCOUTCOMES.119.005597](https://doi.org/10.1161/CIRCOUTCOMES.119.005597)

<sup>86</sup> Schneider MA, Spritzer PM, Soll BMB, et al. Brain Maturation, Cognition and Voice Pattern in a Gender Dysphoria Case under Pubertal Suppression. *Front Hum Neurosci*. 2017;11:528. doi:[10.3389/fnhum.2017.00528](https://doi.org/10.3389/fnhum.2017.00528)

preservation – harvesting of egg or sperm – may be discussed by the proponents of medicalization. However, there are no mature egg or sperm to harvest at Tanner stage 2. Sterility is guaranteed with oophorectomy and removal of testes (castration).

117. It is important to note that a number of individuals who identified as transgender in their teen years and no longer identify as transgender upon reaching maturity have expressed gratitude that they did not undergo medical and surgical interventions that would have rendered them infertile. This sentiment is echoed by detransitioners who did receive these interventions and express disappointment, grief, and anger that nobody resisted their desires. No one challenged them. No one slowed down the younger version of themselves.

87,88

118. The principle of patient autonomy also requires a fiduciary, trusting relationship between physician and patient. Truthfulness and full disclosure of information must occur for the patient and parent to exercise autonomy. As my arguments demonstrate, the low-quality evidence, lack of long-term follow-up, and increasing reports of harm, regret, and detransition, all raise grave concerns about “gender-affirmative care.”

119. In my experience of having reviewed informed consent forms, speaking to physicians and therapists involved in “gender affirmative” care that refer for or prescribe puberty blockers and cross sex hormones, and talking to patients and parents who have transitioned or are seeking to transition, many of these concerns are not disclosed to patients and families. While some well-established risks are mentioned, the profound uncertainties are not acknowledged, and even denied by proponents of “gender-affirmative” care.<sup>89</sup>

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<sup>87</sup> See Vandenbussche (2021)

<sup>88</sup> See Littman (2021)

<sup>89</sup> See Levine, 2022

120. For example, puberty blockers are often misrepresented as fully reversible despite mounting evidence that they irreversibly impeded bone growth, impact cognitive development, change the psycho-sexual profile toward a diminished sexual desire, and likely have a host of other yet unknown consequences. The relative safety record of puberty blockers administered for precocious puberty (e.g., a 5-year old who is starting to develop pubic hair and develop breasts) is being misrepresented as evidence that this intervention will be safe and fully reversible when used off-label to stop normally-timed puberty.
121. Puberty is the developmentally appropriate time when every organ system benefits from sex hormones to reach its optimal adult function. We do not know the long-term effects of stopping the biologically vital, normally timed process of puberty for several years. This is the reason why the UK's National Health Service recently replaced its statement that puberty blockers are reversible and now states: <sup>90,91</sup>

*“Little is known about the long-term side effects of hormone or puberty blockers in children with gender dysphoria.” (NHS)*

122. Also, it is typically not disclosed to the patients that the population on which the Dutch protocol was originally tested does not match most of the cases presenting today and that most cases treated with the protocol today would have been disqualified by the original study. Specifically, the Dutch excluded from transition adolescents whose transgender identity was not clearly established in early childhood, and those with significant mental

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<sup>90</sup> <https://www.spectator.co.uk/article/the-nhs-has-quietly-changed-its-trans-guidance-to-reflect-reality>

<sup>91</sup> <https://www.nhs.uk/conditions/gender-dysphoria/treatment/#:~:text=Puberty%20blockers%20and%20cross%2Dsex%20hormones&text=Little%20is%20known%20about%20the,the%20psychological%20effects%20may%20be.>



health problems.<sup>92</sup> Nor is it typically disclosed to the patients and parents that the mental health of the Dutch study participants did not statistically or meaningfully improve after gender reassignment. Instead, these treatments are misrepresented as “life-saving.”

123. Finally, patient autonomy is correctly understood as the freedom to act towards one’s objective good. “Gender-affirming care” leads to sterilization, increased risk to general health (bone, cardiac, others), surgical complications, the potential for worsened mental health, and in a growing number of instances, future regret. These outcomes are objectively bad.
124. Thus, it is my opinion as a bioethicist that “gender-affirming” interventions with hormones and surgery for minors not only fail to support the core principle of Autonomy, but they directly violate it.

**B. The principle of “Justice” is violated when minors are provided with “gender-affirming” hormones and surgery**

125. The right to control one’s reproduction and sexual function is well recognized by United States law and court rulings. Article 16 of the United Nations Universal Declaration of Human Rights recognizes that “men and woman of full age have the right...to found a family.”
126. It is now well recognized that puberty blockers followed by cross sex hormones are, in effect, chemical castration, which is likely irreversible. The removal of testicles, which WPATH supports as early as 17 years of age in the draft of its upcoming guidelines, is irreversible castration.

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<sup>92</sup> See Deleamarre-van de Waal & Cohen-Kettenis, 2006 and Cohen-Kettenis et al., 2008.

127. It is unjust and unethical to sterilize a gender-non-conforming, mentally distressed adolescent. In my opinion, this is precisely what “gender-affirmative care” is doing to children. Children and adolescents do not have the capacity—the knowledge, understanding, and judgement—to comprehend the gravity of the decision they are making regarding their fertility.
128. The United States medical profession has a shameful history regarding forced and coerced sterilization of minors and adults without informed consent. All people of goodwill now agree that the court erred when it upheld these unethical sterilization practices in *Buck v Bell* (274 U.S. 200, 1927).<sup>93</sup>
129. It is my opinion as a bioethicist that “gender-affirming” interventions for minors violates the core ethical principle of Justice.

C. The ethical principles of “Beneficence” and “Non-Maleficence” are violated by providing minors with “gender-affirming” hormones and surgeries

130. The principles of beneficence and non-maleficence are fundamental principles of medical ethics. They require that medicine must do good and avoid harm. The Dutch Study<sup>94</sup> on which the practice of pediatric transition rests (as evidenced by the Endocrine Society Guidelines’ citations<sup>95</sup>) has demonstrated that the “good” was narrowly defined and remains highly uncertain, while the “harm” was self-evident.
131. The Dutch Study claimed the greater “good” by claiming (correctly) that post-surgery the young adults who emerged after transition were functioning well, or even better, than the

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<sup>93</sup> <https://supreme.justia.com/cases/federal/us/274/200/>

<sup>94</sup> See de Vries et al., 2014

<sup>95</sup> See Hembree et al., 2017

average 21-year-old Dutch peer. However, the study authors did not reflect on the fact that their screening methods nearly guaranteed such an outcome, since their carefully-selected 70 study subjects were already extremely high functioning before treatment.

132. Their beneficial claims also fail to address the harm to the patient with postoperative death after genital surgery and several instances of diabetes and obesity that developed during treatment.<sup>96</sup>
133. It has been longer than 10 years since these adolescents were transitioned, and we have no long-term follow up on this cohort. However, another study by the Dutch of an adolescent treated with the same protocol several years earlier did follow that individual into their mature adult years and the results are not reassuring. When this individual was first followed as a young 20-year old shortly after surgery, he was happy with the transition and the appearance of his genitals.<sup>97</sup> However, when followed up again at the age of thirty-five the situation had changed.
134. The patient was living alone and unable to form a loving relationship with a partner. He attributed the inability to form a long-lasting stable relationship to the shame about his genitalia.<sup>98</sup> This case does not lend confidence to the notion that the youth in the Dutch Study will be thriving in key aspects of their lives once they reach a mature adult age.
135. The Endocrine Society relies heavily on the Dutch Protocol in writing their guidelines, yet they fail to address the serious harms that were present and reported in the Dutch Study.

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<sup>96</sup> See de Vries et al., 2014

<sup>97</sup> Cohen-Kettenis PT, van Goozen SHM. Pubertal delay as an aid in diagnosis and treatment of a transsexual adolescent. *European Child & Adolescent Psychiatry*. 1998;7(4):246-248. doi:[10.1007/s007870050073](https://doi.org/10.1007/s007870050073)

<sup>98</sup> Cohen-Kettenis PT, Schagen SEE, Steensma TD, de Vries ALC, Delemarre-van de Waal HA. Puberty Suppression in a Gender-Dysphoric Adolescent: A 22-Year Follow-Up. *Arch Sex Behav*. 2011;40(4):843-847. doi:[10.1007/s10508-011-9758-9](https://doi.org/10.1007/s10508-011-9758-9)

They fail to mention or address the fact that fertility was destroyed in 100% of the youth transitioned in the Dutch Study. Nor are the 3 cases of new onset diabetes and obesity that developed during the Dutch Study addressed by the Endocrine Society. It cannot be said for certain that transition caused these effects, but a 4.3% rate of diabetes in a pediatric population is highly unusual and should lead to further concern and study. Another adolescent in the Dutch Study stopped short of gender confirming surgery. This patient has had irreversible changes from puberty blockers followed by cross-sex hormones. We do not know the effects of these permanent changes on this young person's life.

136. The one young person who tragically died as a result of surgical complications has already been mentioned. Death was due to tissue necrosis as a complication of a vaginoplasty: a procedure to construct a neo-vagina from the penis after castration. This translates into a 1%-2% death rate.
137. The evidence of regret is now emerging from newer research. The first large study of detransitioners in 2021 reported on 237 people. They stopped transitioning on average 4 years after starting.<sup>99</sup> Another study of 100 people who regretted their sex transition stopped the process on average 3.9 years after it began.<sup>100</sup> These numbers dwarf the participants in the Dutch Study, which ended their report 18 months after transition.
138. Many of the studies that purport benefit of transition recruit participants from online pro-transition activist sites.<sup>101,102</sup> At the same time, little attention is paid to the emerging

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<sup>99</sup> See Vandenbussche, 2021.

<sup>100</sup> Littman, 2021

<sup>101</sup> Turban JL, King D, Carswell JM, Keuroghlian AS. Pubertal Suppression for Transgender Youth and Risk of Suicidal Ideation. *Pediatrics*. 2020;145(2):e20191725. doi:[10.1542/peds.2019-1725](https://doi.org/10.1542/peds.2019-1725)

<sup>102</sup> D'Angelo R, Syrulnik E, Ayad S, Marchiano L, Kenny DT, Clarke P. One Size Does Not Fit All: In Support of Psychotherapy for Gender Dysphoria. *Arch Sex Behav*. Published online October 21, 2020. doi:[10.1007/s10508-020-01844-2](https://doi.org/10.1007/s10508-020-01844-2)

online communities of detransitioners and their stories are readily dismissed by proponents of affirmative care. One such community has over 28,000 subscribers, at least half of whom are estimated to be actual detransitioned patients.<sup>103</sup> The sheer numbers of people on the site sharing their devastating transition stories, their regret, and their harms dwarfs the Dutch case series of 55. The stories posted here are heart wrenching and indisputable evidence of the great harm being done.

139. There is no doubt in my mind that parents of children receiving “gender-affirming” interventions want the best for their children, and they are acting on advice of professionals. It is the physicians and counselors whom I believe have failed these parents and their children, falsely asserting that gender transition will help their children long-term. Many of these professionals themselves are misled by the activism that has taken over US-based professional bodies.
140. No matter how well-meaning the advocates of pediatric gender transition are, their actions lack beneficence. The experiment of medically and surgically transitioning minors lacks long-term outcome data. There is no meaningful evidence of long-term benefits. There are many demonstrable harms. And there remain many unknowns and uncertainties.

#### D. True informed consent for “gender-affirming care” for minors is not possible

141. Informed consent is another foundational principle of bioethics. It rests on all the other principles and requires a trusting and truthful relationship with one’s physician. Physician-patient relationships must respect personal autonomy, promote the patient good, avoid harms, and seek justice. As a bioethicist, I am deeply concerned that valid informed

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<sup>103</sup> <https://www.reddit.com/r/detrans/>

consent, a prerequisite of ethical care, is not possible in the context of “gender-affirmative care” for minors.

142. For informed consent to be valid the minor child or parent must understand the proposed procedure. The possible benefits, risks, limitations, and alternatives must be disclosed to the minor patient and parent. Since the information regarding “gender-affirmative care” is of low quality, unreliable, and very uncertain, a true understanding is not possible.
143. Also, for the consent to be valid, alternative approaches, including the approach to not medically intervene with one’s gender non-conformity, must be discussed. However, alternative approaches such as psychotherapy,<sup>104</sup> which are now recommended as the first line and often the only treatment for gender dysphoric youth in European countries, are often withheld from US children and misrepresented as “conversion.” This is dishonest and further undermines the informed consent process.
144. In addition, informed consent is not valid if decisions are made under coercion or duress (The Nuremberg Code, 1946).<sup>105</sup> It is highly problematic that the so-called “gender specialists” raise the specter of suicide. This can only alarm parents and their children, with wrongful and unsupported claims that these radical interventions are “lifesaving.” These claims wrongly imply that transgender patients will commit suicide if not permitted to transition.
145. It is true that self-harm and suicidal thoughts are increased in trans-identified youth, but the suicide risk is on par with youth who have other mental health conditions, and thankfully,

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<sup>104</sup> Schwartz D. Clinical and Ethical Considerations in the Treatment of Gender Dysphoric Children and Adolescents: When Doing Less Is Helping More. *Journal of Infant, Child, and Adolescent Psychotherapy*. Published online November 22, 2021:1-11. doi:[10.1080/15289168.2021.1997344](https://doi.org/10.1080/15289168.2021.1997344)

<sup>105</sup> <https://www.ushmm.org/information/exhibitions/online-exhibitions/special-focus/doctors-trial/nuremberg-code>

the absolute risk of suicide among gender-dysphoric youth remains exceedingly rare, recently estimated at 0.03% over 10 years in the UK.<sup>106</sup> That the US is not doing similar quality research with clinic-referred populations, instead relying on alarmist statistics derived from online activist surveys, further emphasizes just what an outlier the US-based approach to gender dysphoric minors has become compared to the rest of the western world.

146. Unfortunately, no study to date has been able to demonstrate that actual suicides are reduced post-transition. Parents are wrongly and unethically told that transition is the only solution to their child's problems. The "transition or suicide" mantra proclaimed by gender ideology is coercive, untrue, and unethical.<sup>107</sup>
147. Ethical behavior demands that we are truthful with our patients. Dishonesty, deceit, and coercion are unethical. Problematically, in my experience, some proponents of medicalization of minors mislead children and their families that "gender-affirming care" leads to a "sex change." They assert that through the hormonal and surgical manipulations of one's physical body, the "true sex," which they claim is signified by their "gender identity" will be allowed to emerge. I have heard from youth who decided to detransition when they finally come to the realization that they will never become the opposite sex. It is hard for me to believe that professionals mislead children in such a fundamental way.
148. Children believe adults. This is especially true when adults with medical degrees assure them that they can change sex. At least some of these children will be bitterly disappointed later when they realize that they will be medically dependent for life. Cross-sex hormones

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<sup>106</sup> Biggs M. Suicide by Clinic-Referred Transgender Adolescents in the United Kingdom. *Arch Sex Behav*. Published online January 18, 2022. doi:[10.1007/s10508-022-02287-7](https://doi.org/10.1007/s10508-022-02287-7)

<sup>107</sup> <https://www.wbez.org/stories/id-rather-have-a-living-son-than-a-dead-daughter/69b0e784-d9c1-44a3-a0f7-419864fe0d3c>

will be needed for life to maintain the superficial appearance of the desired sex. They will never be able to procreate. Their sexual function destroyed, and reproductive capacity lost forever. And they will come to realize that their sex, which permeates every cell in their body, is immutable and unchangeable.

149. Mature adults with well-controlled mental health problems can consent to gender transition, provided they have received full and truthful disclosure of the complete range of benefits, risks and uncertainties associated with gender transition.
150. However, I am confident that children are not capable of either consenting or assenting to such a profound decision under any circumstances—and especially when they and their caregivers are effectively being misled by the medical community in fundamental ways.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct. Executed on May 1, 2022.

  
Patrick Hunter



## **CURRICULUM VITAE**

Patrick K. Hunter, MD, MSc

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### **PERSONAL DATA**

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### **EDUCATIONAL DEGREES**

May 1992 MD University of Louisville  
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June 2008 to June 2013 U.S. Department of Defense  
Tripler Army Medical Center and  
Naval Health Clinic Hawaii  
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Academic General Pediatrician  
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July 1998 to June 2008 The Purcell Clinic  
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July 1995 to June 1998 Staff Pediatrician &  
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Captain, Medical Corps US Army  
Darnall Army Community Hospital  
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## CURRICULUM VITAE

Patrick K. Hunter, MD, MSc

---

### EDUCATIONAL APPOINTMENTS

July 2017 to present	Assistant Professor of Medicine University of Central Florida College of Medicine
March 2009 to June 2015	Assistant Clinical Professor Department of Pediatrics University of Hawaii John A. Burns School of Medicine
February 2012 to July 2013	Assistant Clinical Professor Department of Pediatrics Uniformed Services University of the Health Sciences Bethesda, Maryland
1998 – 2008	Study Investigator North Carolina Children and Adult Research Foundation

### CLINICAL INTERESTS

Biomedical ethics  
Judicious use of health care services  
Immunizations  
Asthma -- patient and parental education and motivation  
Promotion of early childhood literacy  
Newborn and Neonatal Care  
Breastfeeding Promotion  
Infectious Diseases  
Well Child Care  
Motivational Interviewing

### HOSPITAL APPOINTMENTS

Nemours Children's Hospital Orlando, FL	2015 to 2021
Ethics Committee	
Maui Memorial Hospital Wailuku, HI	2013 to 2015
Tripler Army Medical Center Honolulu, HI	2008 - 2012
Scotland Memorial Hospital Laurinburg, NC	1998-2009
Medical Record Review Committee	2001-2002
Chairman, Department of Pediatrics	2001-2002, 2007-2008
Medical Executive Committee	2001-2005, 2007-2008
Medical Staff Secretary	2001-2002
Chief of Staff—Elect	2002-2003
<b>Chief of the Medical Staff</b>	<b>2003-2004</b>
<b>Chair, Credentials Committee</b>	<b>2004-2005</b>
<b>Physician Effectiveness Committee</b>	<b>2002-2008</b>

## CURRICULUM VITAE

Patrick K. Hunter, MD, MSc

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### MEDICAL LICENSES

Hawaii  
Florida

### BOARD CERTIFICATION

American Board of Pediatrics October 1995

### COMMUNITY SERVICE

Scotland County Habitat for Humanity Board Member	2002-2003
Scotland Memorial Hospital Foundation Board Member	1999-2002
Scotland Memorial Hospital Board Member	2003-2005
Executive & Operating Committee Member	2003-2004
St. Andrews Presbyterian College Laurinburg Area Campaign Committee	2000 and 2007
St. Anthony Catholic Church Knights of Columbus	2008 to 2013
Pastoral Council	2010 to 2012
St. Thomas Free Clinic Pediatrician	2018 to 2021
St. John Fisher Catholic Church Finance Committee	2018 to 2021

### ABSTRACTS, PAPERS, AND PRESENTATIONS

The Western Society of Pediatric Research Annual Meeting, February 1994  
Pallister Hall syndrome in siblings, a case report and review of the literature Abstract and presentation

Smith AE, Vedder TG, Hunter PK, et al. The Use of Newborn Screening Pulse Oximetry to Detect Cyanotic Congenital Heart Disease: A Survey of Current Practice at Army, Navy, and Air Force Hospitals. *Military Medicine*. March 2011; 176(3) 343-346

Hunter PK. Political Issues Surrounding Gender Affirming Care of Transgender Youth. *JAMA Pediatrics*. December 2021; 176(3):322-323. doi:10.1001/jamapediatrics.2021.5348

**DOC. 69-7**



**UNITED STATES DISTRICT COURT  
 MIDDLE DISTRICT OF ALABAMA  
 NORTHERN DIVISION**

REV. PAUL A. EKNES-TUCKER,	)	
<i>et al.</i> ,	)	
	)	
<i>Plaintiffs</i> ,	)	
	)	
v.	)	No. 2:22-cv-00184-LCB-SRW
	)	
KAY IVEY, in her official capacity	)	
as Governor of the State of Alabama,	)	
<i>et al.</i> ,	)	
	)	
<i>Defendants.</i>	)	

**DECLARATION OF DIANNA KENNY**

My name is Dianna Kenny. I am over the age of 19, I am qualified to give this declaration, and, I have personal knowledge of the matters set forth herein.

I am a former Professor of Psychology at the University of Sydney. I now practice as a consulting psychologist and psychotherapist. My CV is attached to this declaration. Recent publications can be found at [www.diannakenny.com.au](http://www.diannakenny.com.au) and <https://www.researchgate.net/profile/Dianna-Kenny>. Some are also listed on my CV.

I was retained by the State of Alabama as an expert witness in the above-styled case. A copy of my expert report is attached to this declaration. It contains my opinions in this matter based upon my research and experience. I have reviewed the Complaint filed by the Plaintiffs and the declarations submitted by the Plaintiffs.

In the past four years, I have provided expert testimony in the following cases: 12, supplied on request.

I am compensated at the rate of \$\_\_400\_\_ per hour for my work on this matter. My compensation is not dependent upon the substance of my opinions or the outcome of the case.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct. Executed on \_\_\_\_1 May\_\_\_\_, 2022.

A handwritten signature in blue ink that reads "Dianna Kenny". The signature is written in a cursive style with a large, stylized "K".

Dianna Kenny \_\_\_\_\_

**IN THE UNITED STATES DISTRICT COURT  
FOR THE MIDDLE DISTRICT OF ALABAMA  
NORTHERN DIVISION**

**JEFFREY WALKER, et al.,**

**Civil Action No. 2:22-cv-00167**

**Plaintiffs,**

**v.**

**STEVE MARSHALL, in his official  
capacity as Attorney General of  
the State of Alabama, BRIAN C.T.  
JONES, in his official capacity as  
District Attorney for Limestone  
County, and JESSICA VENTIERE, in  
her official capacity as District  
Attorney for Lee County,**

**Defendants.**

**DECLARATION OF DIANNA KENNY PHD IN SUPPORT OF  
S.B. 184 (THE “FELONY HEALTH CARE BAN” OR THE “BAN”)**

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## CHAPTER 1

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### SOCIAL CONTAGION

#### Abstract

In this chapter, I review the evidence for social contagion of gender dysphoria in adolescents. I begin with a review of the historical phenomenon of social contagion, demonstrating that it predated the digital age. I then review the nature of social contagion and the mechanisms by which certain phenomena are propagated through social networks. Social network analysis, the method applied to study contagions of all kinds, was first developed and used in public health as a way of determining the spread of diseases. For the spread of social phenomena among adolescents, three mechanisms - peer contagion, deviancy training and co-rumination in peer groups - have been identified as “spreaders.” Four possible causes of peer effects – endogenous, exogenous, correlated and social media – all amplify the spread of information in a social network. Four areas of empirically established social contagion in adolescents - marijuana use, eating disorders, non-suicidal self-injury, suicide and emotion – are presented as a prelude to the discussion of how the same processes are at work in the social contagion of gender dysphoria and the wish to transition in adolescence. Specific mechanisms of transmission such as low gender typicality, peer victimization, ingroups, the trans-lobby, the role of social media in rapid onset gender dysphoria (ROGD) in are proposed. Preliminary statistical support for social contagion in gender dysphoria are presented.

#### INTRODUCTION: SOCIAL CONTAGION PREDATES THE DIGITAL AGE

It is not famine, not earthquakes, not microbes, not cancer but man himself who is man's greatest danger to man, for the simple reason that there is no adequate protection against psychic epidemics, which are infinitely more devastating than the worst of natural catastrophes - Carl Jung

The term social contagion describes the “spread of phenomena (e.g., behaviours, beliefs and attitudes) across network ties” (Christakis & Fowler, 2013, p. 556). Social contagion has existed long before the advent of the digital age and social media. In 1774, Johann von Goethe (1990) published a novel, *The sorrows of young Werther*, in which an idealistic young man finds his actual life too difficult to reconcile with his poetic fantasies, including his

unrequited love for his friend's fiancée. He eventually becomes so depressed and hopeless by the perceived emptiness of his life, he commits suicide. Goethe was able to capture the nameless dread and endless longing of the human condition so well that his novel spawned a number of suicides, committed in the same way that Werther had killed himself, by shooting (Phillips, 1974). Such was the alarm created by this phenomenon, the book was banned in several European cities.

More than two hundred years later, in 1984, the suicide of a young Austrian businessman, who threw himself in front of a train, initiated a spate of similar suicides that averaged five per week for nearly a year. Sociologists argued that this alarming occurrence was amplified by media coverage that glamorised suicide by providing graphic images of the suicidal act and details of the young man's life. When media exposure of the event was curtailed and then stopped completely, the suicide rate dropped by 80 percent almost immediately. Although the influence of suggestion and imitation on suicide rates was dismissed by Durkheim (2005/1897), Phillips's (1974) work indicated that these factors do indeed play a significant role in the increase in suicides following a publicised suicide.

In 1841, a Scottish journalist, Charles Mackay (2012) wrote a book entitled *Extraordinary popular delusions and the madness of crowds*. In the preface to the first edition of the book, the aim of writing it is stated thus:

...to collect the most remarkable instances of those *moral epidemics* ... to show how easily the masses have been led astray, and how imitative and gregarious men are, even in their infatuations and crime (p. 1) ...Popular delusions began so early, spread so widely, and have lasted so long, that instead of two or three volumes, fifty would scarcely suffice to detail their history... The present may be considered...a miscellany of delusions, a chapter only in the great and awful book of human folly (p. 3).

The preface to the second edition in 1852 continued this theme:

Nations... like individuals, ...have their whims and their peculiarities; their seasons of excitement and recklessness... whole communities suddenly fix their minds upon one object and go mad in its pursuit; ...millions of people become simultaneously impressed with one delusion, and run after it, till their attention is caught by some new folly more captivating than the first. At an early age in the annals of Europe its

population lost their wits about the sepulchre of Jesus and crowded in frenzied multitudes to the Holy Land; another age went mad for fear of the devil and offered up hundreds of thousands of victims to the delusion of witchcraft... the belief in omens and divination of the future... defy the progress of knowledge to eradicate them entirely from the popular mind... *Men... think in herds; ...they go mad in herds, while they only recover their senses slowly, and one by one* [Author's italics] (p. 7).

With the arrival of COVID-19, the World Health Organization (WHO) warned that there would be an “infodemic”<sup>1</sup> of misinformation spawned by social contagion. This has in fact occurred, but the false beliefs have not taken centre stage and swept all science before it in the manner of transgender ideology. As Anderson (2018)<sup>2</sup> concluded:

The [transgender] movement has to keep patching and shoring up its beliefs, policing the faithful, coercing the heretics, and punishing apostates, because as soon as its furious efforts flag for a moment or someone successfully stands up to it, the whole charade is exposed. That’s what happens when your dogmas are so contrary to obvious, basic, everyday truths. A transgender future is not the “right side of history,” yet activists have convinced the most powerful sectors of our society to acquiesce to their demands. While the claims they make are manifestly false, it will take real work to prevent the spread of these harmful ideas.

## SOCIAL NETWORK EFFECTS UNDERLIE SOCIAL CONTAGIONS

Using very large datasets (e.g., Framingham Heart Study) that have collected longitudinal data on original participants (Original cohort), as well as their children (Offspring cohort) and their children’s children (Third generation cohort) and including their spouses, siblings, friends and neighbours, Christakis and Fowler have shown that social network effects, known as clustering, remain strong and can extend to those up to three degrees of separation from the original cohort. Such effects have been demonstrated across a large range of factors by different researchers using differing datasets. Examples include overweight/obesity, sleep patterns, smoking, alcohol abuse, alcohol abstention, marijuana use, loneliness, happiness, depression, cooperation, and divorce among others. It can be argued that the spread of

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<sup>1</sup> [W.H.O. Fights a Pandemic Besides Coronavirus: An ‘Infodemic’ - The New York Times \(nytimes.com\)](https://www.nytimes.com/2020/03/11/health/coronavirus-infodemic.html)

<sup>2</sup> [The Philosophical Contradictions of the Transgender Worldview - Public Discourse \(thepublicdiscourse.com\)](https://thepublicdiscourse.com/2018/05/10/transgender-worldview/)

gender dysphoria and transgenderism is underpinned by these now well-established mechanisms of social contagion in other human behaviours.

Social network analysis, the method applied to study contagions of all kinds, was first developed and used in public health as a way of determining the spread of diseases (e.g., influenza, HIV/AIDS) that resulted in pandemics. It was subsequently applied to the challenges of introducing changes and innovations in the health system (Blanchet, 2013). Its applications have since expanded with the advent of computers, the internet, mobile and smart phones, and social media. Members of a network play different roles in the dissemination of innovations. A small number will adopt early (i.e., early adopters). Some of these will become opinion leaders who are central to the network who contaminate their “peers” (homophily) who in turn will influence those others at different levels of the network.

There are three types of social networks; (i) egocentric (networks assessing a single individual); (ii) sociocentric (social networks in a well-defined social space, such as a hospital or a school); and (iii) open system networks (e.g., globalised markets, social media). Each network consists of nodes (members), ties (connections between nodes), and measures of centrality, density and periphery or distance between the nodes. Networks with high centrality are the most effective in disseminating information or innovation. A key example is the transactivist lobby that has achieved spectacular success in a short time in changing health care, educational practices and legislation related to transgender individuals. Other characteristics of networks include cohesion (number of connections within a network) and shape (distribution of ties within the network) (Otte & Rousseau, 2002).

First, I examine the concept of social contagion and the mechanisms by which it influences behaviour and attitudes. Then I review four adolescent behaviours that have been empirically revealed to be subject to social contagion. I then demonstrate that the same principles of social contagion apply to the increase of young people who believe that they are transgender and are consequently seeking irreversible medical remedies to assuage their gender dysphoria. Finally, I explore the social contagion (i.e., clustering) of medical practice with respect to treatment of gender dysphoria, the precipitous legislation appearing in its support, and changes to policy and practice in education and sport, despite our collective failure to

date to fully understand the phenomenon of gender dysphoria and its rapid, epidemic-like spread in the Western world.

## THE MECHANISMS OF SOCIAL CONTAGION

### (i) Peer contagion

Peer contagion is a form of social contagion, defined as a process of reciprocal influence to engage in behaviours occurring in a peer dyad that may be life-enhancing (e.g., taking up a sport, studying for exams, health screening, resisting engaging in negative behaviours, altruism) or life-compromising (e.g., illegal substance use, truanting from school, aggression, bullying, obesity). Peer contagion has a powerful socializing effect on children beginning in the pre-school years. By early childhood, the time spent interacting with same-age playmates frequently exceeds time spent with parents (Ellis, Rogoff, & Cromer, 1981). Further, characteristics of peer interactions in schools (e.g., aggression, coercive behaviours, mocking peers) are carried over into the home environment (Patterson, Littman, & Bricker, 1967). By middle childhood, gender is the most important factor in the formation of peer associations, highlighting the significance of gender as the organizing principle of the norms and values associated with gender identity (Fagot & Rodgers, 1998).

### (ii) Deviancy training as a mechanism of social contagion

Different mechanisms of transmission of peer influence have been identified. Deviancy training, in which deviant attitudes and behaviours are rewarded by the peer group have a significant effect on the development of antisocial attitudes and behaviours such as bullying, physical violence, weapon carrying, delinquency, juvenile offending, and substance abuse (Dishion, Nelson, Winter, & Bullock, 2004). Aggression in adolescence becomes more covert and deliberate and takes the form of exclusion, spreading rumours, and suborning relational damage among an adolescent's friendship network (Sijtsema, Veenstra, Lindenberg, & Salmivalli, 2009). Interestingly, adolescents associated with peers who engage in instrumental aggression became more instrumentally aggressive, while those associated with peers who engaged in relational aggression became more relationally aggressive, demonstrating the specificity of the effects of peer contagion via the deviancy training.

**(iii) Co-rumination as a form of social contagion**

Another form of peer contagion in adolescence is co-rumination, a process of repetitive discussion, rehearsal and speculation about a problematic issue within the peer dyad or peer group that underlies peer influence on internalizing problems such as depression, anxiety, self-harm, suicidal ideation and suicide (Schwartz-Mette & Rose, 2012). Co-rumination is more common among adolescent girls (Hankin, Stone, & Wright, 2010) although a similar phenomenon among boys has been observed. Being in a friendship that engages in perseverative discussions on deviant topics has been associated with increased problem behaviour over the course of adolescence. The longer these discussions, the greater the association with deviant behaviour in later adolescence (Dishion & Tipsord, 2011).

Peer contagion may undermine the effects of positive socializing forces such as schools, rehabilitation programs for young offenders, and treatment facilities for eating disorders among others. Collecting same-minded adolescents into group programs may be counter-productive because the peer influence impacts of a homogeneous peer group to maintain disordered behaviours may be greater than the program effects of the treatment facility (Dishion & Tipsord, 2011).

Young people are particularly vulnerable to peer contagion if they have experienced peer rejection, hostility and/or social isolation from the peer group (Light & Dishion, 2007). On the contrary, protective factors against peer contagion effects include secure attachment to parents, adequate adult supervision and oversight of the young person's activities, school attendance, and the capacity for self-regulation (T. W. Gardner, Dishion, & Connell, 2008).

**(iv) Social contagion has a causal effect on behaviour uptake**

Establishing a causal role for the effect of peer behaviour on adolescents is difficult because adolescents choose their peer networks; that is, they choose to associate with like-minded adolescents and those exhibiting similar attributes (homophily). This raises the question: Do adolescents choose their peers because they sanction and engage in similar behaviours or can peer social networks explain the uptake of (new) behaviours in individuals in the network? Sophisticated statistical models have been used to tease out the relative contributions of peer selection and peer influence. Correctly attributing the effects of these two factors has

important policy implications since most interventions for reducing risky behaviour among adolescents are implemented at a school level (Ali & Dwyer, 2010).

(v) The special case of social contagion via social media

In the world of social media, social contagion takes on a new, less complex, and narrower meaning:

“Unlike the broadcasts of traditional media, which are passively consumed, social media depends on users to deliberately propagate the information they receive to their social contacts. This process, called social contagion, can amplify the spread of information in a social network” (Nathan & Kristina, 2014, p. 1).

For example, the social network ‘Instagram’ is one of the most popular platforms for adolescents and young people, with 44% reporting Instagram to be an important part of their daily lives (Feierabend et al. 2015). Analysis of content shows that it is a major vehicle for the sharing of mental health issues, including depression, eating disorders, and non-suicidal self-injury (NSSI) (Fischer et al. 2015).

Systematic reviews have identified both potential risks and benefits of online activity. On the one hand, it reduces social isolation and offers encouragement, camaraderie, and reduction of self-harm impulses. On the other, it enables, enhances, or triggers potential risks of ‘copycat’ behaviours such as NSSI, suicide, and eating disorders through normalization of pathological behaviours, or vicarious and social reinforcement of these behaviours (Brown, et al., 2017).

A number of studies have demonstrated the impact that social media can have on emotional contagion. For example, one study<sup>3</sup> demonstrated that interactions with others can alter our mood in the direction of the mood of the person with whom we are interacting. A number of mechanisms - for example, social influence, social selection, and shared external causation – can impact our changes in mood. The phenomenon is prevalent in bounded social networks such as touring orchestras where adolescent musicians have been observed to become more

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<sup>3</sup> Block, P., & Burnett Heyes, S. (2020). Sharing the load: Contagion and tolerance of mood in social networks. *Emotion*. Advance online publication. doi: <https://doi.org/10.1037/emo0000952>

reciprocally similar in mood to their close associates on tour. The observed emotional contagion effects are greater for negative than positive moods.

In a study on Twitter posts<sup>4</sup>, the distribution of positive and negative comments varied according to weekends and holidays. Figure 1 shows the trends.

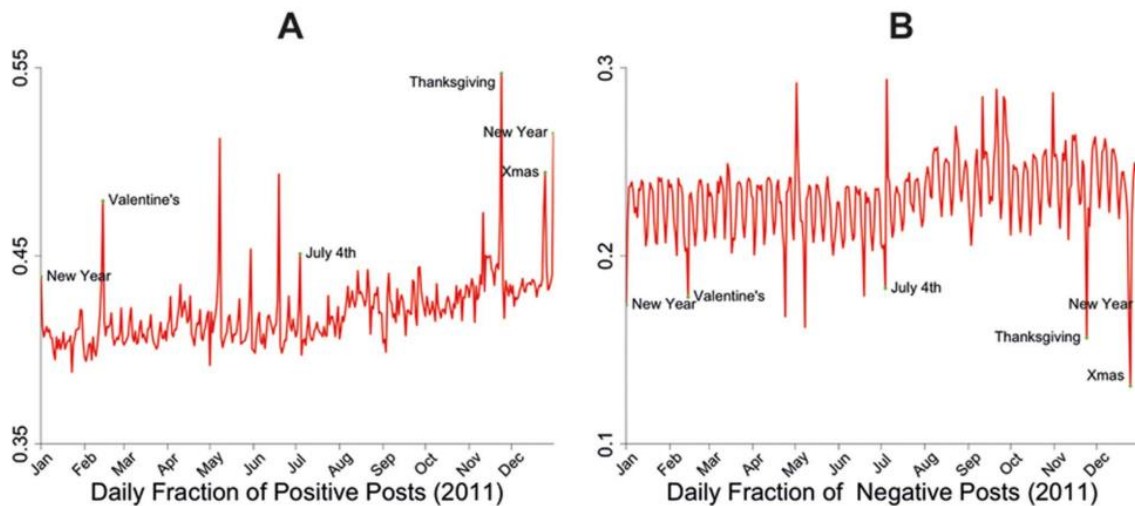


Figure 1

Pain behaviour has also been shown to be affected by the social mechanisms of observation, modelling, vicarious learning, social interaction and media reports. Both placebo and nocebo hyperalgesia have been recorded in patients who observed confederates modelling pain behaviour in response to social stimuli<sup>5</sup>.

While many studies show how emotions spread between individuals in direct contact, a novel study demonstrated that online social networks produce emotional contagion in the same way<sup>6</sup>. Using data from millions of Facebook users, the researchers showed that rainfall directly influences the emotional content of their status messages, including messages of friends in other cities who were not experiencing rainfall. Results showed that ...”for every person affected directly, rainfall altered the emotional expression of one to two other people,

<sup>4</sup> Golder SA, Macy MW (2011) Diurnal and seasonal mood vary with work, sleep, and daylength across diverse cultures. *Science* 333: 1878–81.

<sup>5</sup> Benedetti, F. (2013). Responding to nocebos through observation: social contagion of negative emotions. *Pain*, 154(8), 1165.

<sup>6</sup> Coviello, L., Sohn, Y., Kramer, A. D., Marlow, C., Franceschetti, M., Christakis, N. A., & Fowler, J. H. (2014). Detecting emotional contagion in massive social networks. *PloS One*, 9(3), e90315.



suggesting that online social networks may magnify the intensity of global emotional synchrony” (p. 1165).

## EVIDENCE FOR SOCIAL CONTAGION AMONG ADOLESCENTS

In this section, I review the evidence for social contagion among adolescents for four key psychopathologies that arise in adolescence (eating disorders, marijuana use, non-suicidal self-injury, and suicide) and compare the mechanisms of social contagion in these well documented areas with evidence for social contagion in gender dysphoria.

### (i) Anorexia nervosa

A number of researchers have identified the central role of social contagion in the development and propagation of anorexia nervosa in adolescent girls (Allison, Warin, & Bastiampillai, 2014). Adolescence is a time in which the focus on oneself becomes intense, and for some, critical and unrelenting. The developing female body constitutes one of the main objects of scrutiny. When this scrutiny is compounded by the collective inspection of all of one’s body’s flaws, the peer group becomes a powerful crucible for both the development and maintenance of disordered eating.

Intensification of peer influence in closed communities of like individuals, such as schools, inpatient wards, residential units (Huefner & Ringle, 2012), or therapy groups often results in the advocacy of the practices (e.g., self-starvation, compulsive exercise, deceitful practices around eating) associated with anorexia nervosa (Dishion & Tipsord, 2011).

If we add social media and online networks as further sources of influence, affected adolescents can effectively surround themselves exclusively with like minds, thereby normalising cognitive distortions around eating and body image and making recovery very difficult. These effects are further compounded by the high status of thinness in western culture, and an ubiquitous focus on nutrition and exercise. Originally thought to be caused by genetics and pathological family dynamics, this view was revised with the finding, using longitudinal study designs and social network analyses, that same-gender, mutual friends were most influential in the development of obesity in adulthood, with siblings and opposite-sex friends having no effect (Christakis & Fowler, 2007).

## **(ii) Marijuana use among adolescents**

Substance use amongst adolescents is a major public health issue (Fletcher, Bonell, & Hargreaves, 2008), with a population study conducted by the Center for Disease Control and Prevention showing that 10 percent of youths reported using illegal substances before the age of 13, with marijuana the most frequently used substance (Chen, Storr, & Anthony, 2009). Peer influence has long been suspected as a stimulus that amplifies risky behaviours in the social network (Clark & Loheac, 2007; Lundborg, 2006).

Using the National Longitudinal Study of Adolescent Health (Add Health) (n=20,745) representing a sample of adolescents from grades 7-12 in 132 middle and high schools in 80 communities across the USA examined the influence of peer networks in the uptake and continued use of marijuana. The peer group was identified by the nomination of close friends and classmates within a grade were used to identify the broader social network from which friends were chosen (Ali et al., 2011).

Results showed that for every increase in marijuana use of 10 percent in adolescents in a close friend network increased the likelihood of marijuana use by two percent. An increase of 10% in usage in grade peers was associated with a 4.4 percent increase in individual use. Reporting a good relationship with one's parents, living in a two-parent household and being religious were protective against marijuana uptake. When peer selection and environmental confounders were held constant, increases in close friend and classmate usage by 10 percent both resulted in a five percent increase in uptake in individuals within those networks

## **(iii) Non suicidal self-injury (NSSI)**

NSSI is defined as a deliberate self-inflicted attack on one's own body without suicidal intent. It excludes cultural practices such as ear piercing, tattooing, or circumcision, most of which are performed by others. NSSI is defined as socially contagious when at least two people in the same group inflict NSSI within a 24-hour time period. The social contagion of NSSI has been reported in a variety of 'closed' social networks such as in inpatient units, prisons, group homes, and special education schools, as well as in community samples of adolescents, young adults and college students (Jarvi, Jackson, Swenson, & Crawford, 2013).

Adolescence (onset between 12 and 14 years) and early adulthood are high-risk developmental periods for NSSI (Lloyd-Richardson, Perrine, Dierker et al., 2007). Between 14% and 21% of high-school aged adolescents report engaging in NSSI, with higher estimates (30%-40%) for adolescent psychiatric populations (Muehlenkamp, Hoff, Licht, Azure & Hasenzahl, 2008).

More recently, social media has been identified as an important conduit for social contagion of NSSI among young people. Platforms such as Instagram have high-frequency occurrences of pictures from adolescents who have self-harmed. When associations between characteristics of pictures (e.g., seriousness and type of the self-injury) and comments (e.g., supportive, empathic, negative, offers of help) and weekly and daily trends of posting were analyzed, patterns emerged suggesting social contagion. For example, the more serious injuries attracted more views and comments. Social reinforcement, imitation and modelling of NSSI through social media are the possible mechanisms whereby young people increase their risk of engaging in NSSI through digital means (Brown, Fischer, Goldwisch, Keller, Young, & Plener, 2018; Fulcher, Dunbar, Orlando, Woodruff, & Santarossa, 2020).

#### (iv) Suicide

Although social ties are generally protective against loneliness, depression and suicide, social ties can be toxic and can amplify the risk of psychopathology in members of a social network (Christakis & Fowler, 2008). Exposure to the suicidal ideation or suicide attempts of significant others increases the risk of suicidality in other network members (Abrutyn & Mueller, 2014). Experiencing self-harm or suicide at close quarters may erode the emotionally regulating effects of normative moral precepts against such behaviour (Mueller, Abrutyn, & Stockton, 2015). When vulnerable individuals share “ecologically bounded spaces” (p. 205) like schools or the family home, this may increase suicide contagion if social relationships within those spaces are psychopathological. Our emotional connections to members of our social networks is the mechanism through which social learning and the development of normative behaviours and attitudes are built. However, negative emotions are more “contagious” and thus exert a greater impact on members (Turner, 2007).

Celebrity suicides also trigger spikes in suicide rates, with the greater visibility of the celebrity and prolonged coverage of the suicide triggering higher spikes and longer duration of

elevation of rates of suicide amongst fans (Fu & Chan, 2013; Stack, 2005). Durkheim (1951) highlighted the phenomenon of suicide outbreaks or “point clusters” defined as “temporally and geographically bounded clusters” such as gaols, regiments, monasteries, psychiatric wards, and First Nations reservations (Mueller et al., 2015, p. 206). Individuals in such networks share a collective identity that appears to heighten subsequent suicides following the suicide of the first decedent (Niedzwiedz, Haw, Hawton, & Platt, 2014).

Perhaps one of the most compelling studies on the social contagion of suicide is the study of celebrity suicides by Ha and Yang (2021). This study tracked the suicides 10 days before a well-publicised celebrity suicide and then the suicides 10 days after the suicide was reported in the media. Figure 2 presents these data graphically.

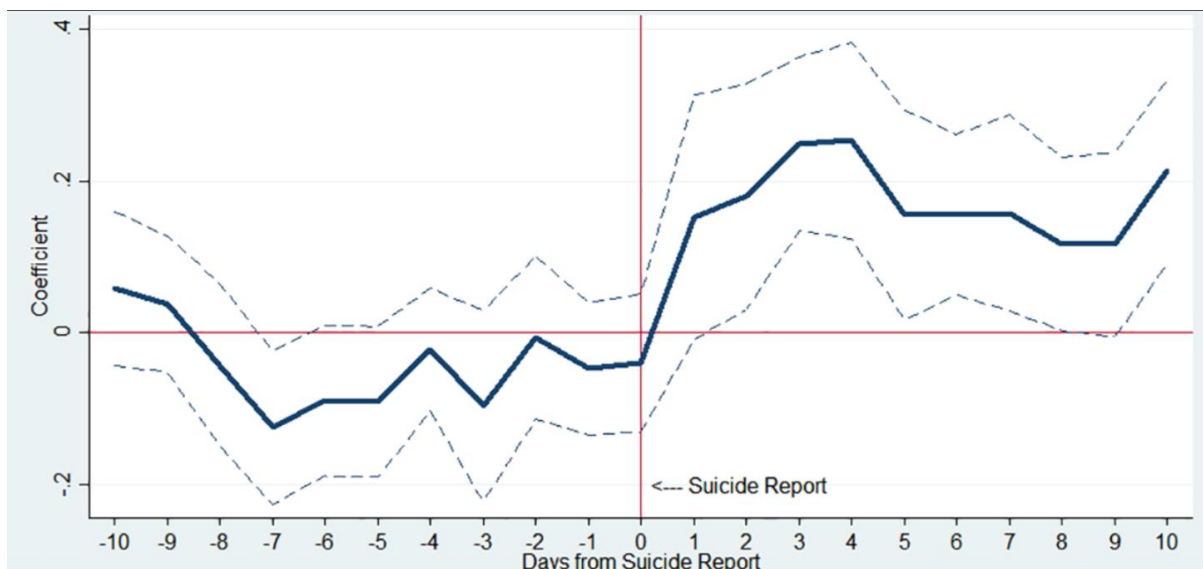


Figure 2<sup>7</sup> Suicide trends before and after reporting of a celebrity suicide

The sharp increase in suicides following celebrity suicide was mostly accounted for by suicides in the 10–29-year age group, the age group. Figure 3 shows the trends.

<sup>7</sup>The y-axis indicates an approximate percent change in public suicide by corresponding day

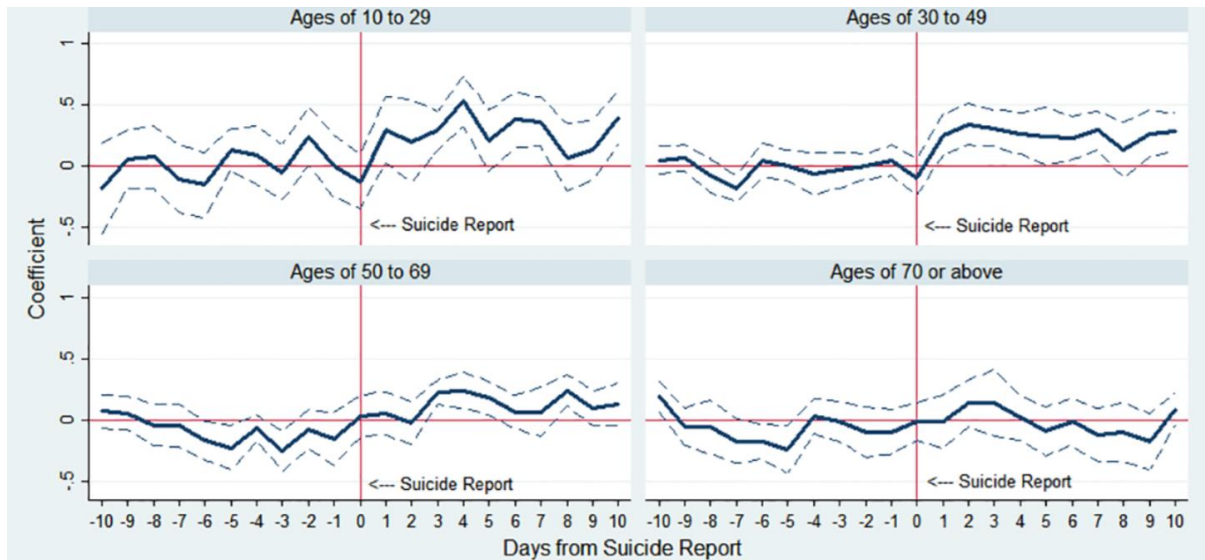


Figure 3 Suicide trends by age group

When the data are segmented by sex (Figure 4), the figures show that females are more susceptible to social contagion than males. The is exactly the same pattern of social contagion we are witnessing in gender dysphoria – young females aged between 10 and 29 years. Is this a coincidence?

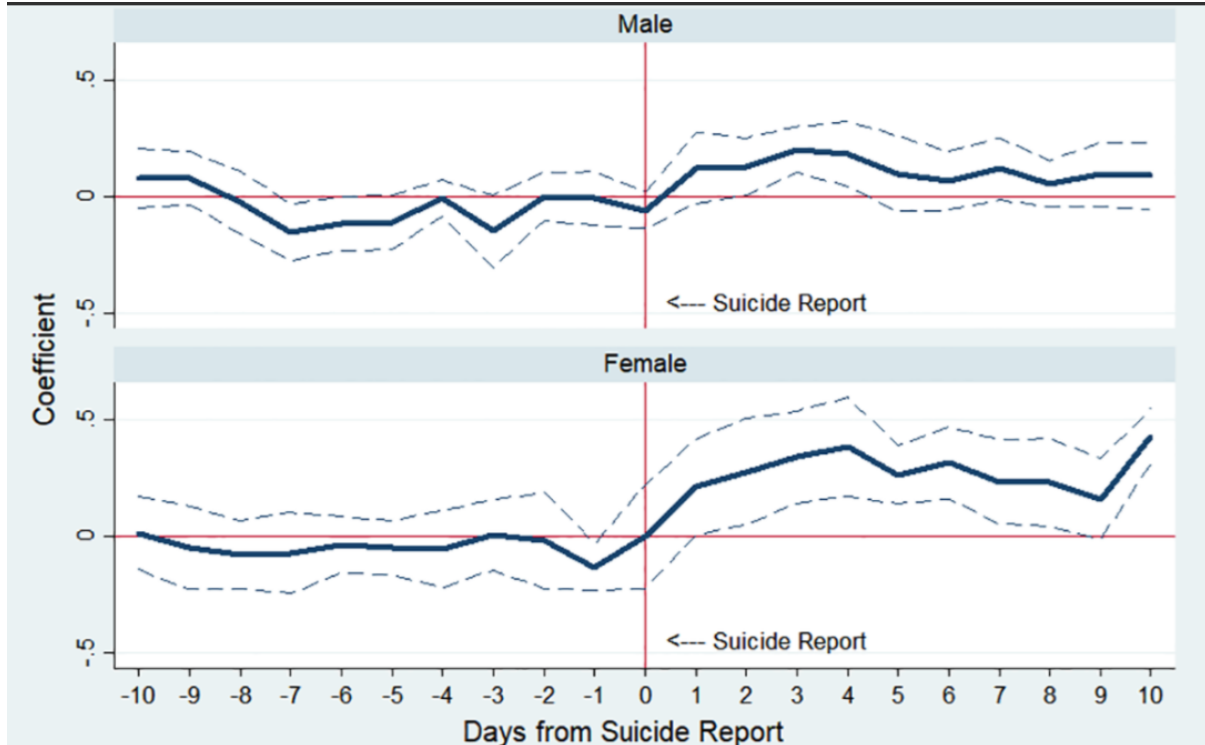


Figure 4 Suicide trends by sex

A well-documented example of a suicide “echo” cluster (an identical suicide cluster occurring within 10 years of a first cluster) occurred in two high schools in Palo Alto that, between them, had suicide rates four to five times higher than the national average. In 2009, three students committed suicide in a nine-month period by stepping in front of a commuter train. A fourth student committed suicide by hanging. In 2013 a mental health survey showed that 12 percent of students from these schools had seriously considered suicide in the previous 12 months. Thereafter, there was another spate of suicides, with three students taking their lives within three weeks of each other. A fourth committed suicide four months later by jumping off a tall building and a fifth followed shortly afterwards by walking in front of a train. Extreme perfectionism and pressure to excel at school, get into Stanford, make a lot of money, and be ostentatiously successful materially and intellectually were assessed to be far too great a burden for the more vulnerable students to withstand.

Using the same data set as the study examining marijuana use but following up four waves of these participants into adulthood, Wave IV assessed suicidality in young adults aged 24-32. This study showed that holding all other psychological risks constant, those young people having a role model who attempted suicide were more than twice as likely to report suicidal ideation in the following 12 months. Participants who had a friend or family member commit suicide were 3.5 times more likely to attempt suicide themselves compared with those who had no close associate attempt or commit suicide in the same 12-month timeframe. These effects were enduring. Young adults who reported an attempted suicide of a role model were more than twice as likely to report a suicide attempt six years after the role model’s attempt compared with their otherwise similar peers. Attempting suicide in adolescence increased suicidal ideation and suicide attempts in young adulthood. Significant risk factors for this association included experiencing emotional abuse in childhood, a diagnosis of depression, and a significant other attempting suicide. Thus, suicide contagion appears to be a significant risk factor for suicide in young adulthood but contagion in this study did not require bounded social contexts.

## SOCIAL CONTAGION OF GENDER DYSPHORIA

The UK has reported a 4,000% increase in the number of children presenting to gender clinics over the past 10 years. Similarly, Sweden has reported a 1,500% in the same time period.

Commentators on the burgeoning incidence of young people claiming that they are transgender assert that peer contagion may underlie this ominous trend. However, it has rarely been systematically studied either theoretically or empirically. Given the strong evidence of peer contagion in suicide, substance abuse and eating disorders, especially among adolescents, the role of peer contagion in gender dysphoria demands urgent attention.

If we examine the gender dysphoria epidemic in social network terms, we see several features operating. It is an open-system network with nodes and ties expanding across the oceans to the US, UK, Asia, Europe, Scandinavia, and Australia. Most countries are reporting sharp increases in the number of people seeking services and treatment for gender dysphoria. Many are ramping up services and setting up new gender clinics to cope with demand. This network is highly centralised with only one voice – the transactivist lobby - being heard above the desperate whispers of terrified parents and horrified academics, doctors, psychologists and psychotherapists. Opinion leaders operating at the centre of these networks are very influential. The level of density in a network has two effects – firstly, it enhances the circulation of information between members and secondly, it blocks the introduction of dissenting ideas and evidence (Iyengar, Van den Bulte, & Valente, 2011).

The field is too young to have attracted researchers to undertake social network analyses to assess peer contagion effects in gender dysphoria. Hence, formal empirical studies have not yet been conducted. However, there is evidence from several sources that peer contagion may be a relevant factor in the sharp increases in young people presenting with gender dysphoria.

**(i) Low gender typicality, peer victimization, ingroups and the trans-lobby**

Low gender typicality (i.e., perceived lack of fit within one's binary gender) has a significant impact on social acceptance within one's peer group (Sentse, Scholte, Salmivalli, & Voeten, 2007). It is strongly associated with adjustment difficulties, behavioural problems, lower self-esteem, and increased internalizing disorders (e.g., anxiety, depression) (Smith & Juvonen, 2017). As children progress to adolescence, peer as opposed to parental acceptance becomes paramount. Peers therefore take over the role of gender socializing agents from parents (Blakemore & Mills, 2014). Adolescent peers tend to be critical of behaviours, dress,



mannerisms and attitudes that are not gender typical as a way of policing and reinforcing gender norms and respond with criticism, ridicule, exclusion and even intimidation of non-conformers (Zosuls, Andrews, Martin, England, & Field, 2016). Research shows that the problems accruing to low gender typicality are mediated by peer victimization and that reducing peer victimization may ameliorate these difficulties (Smith & Juvonen, 2017). Conversely, peer acceptance mediated the self-worth of gender non-conforming 12- to 17-year-olds (Roberts, Rosario, Slopen, Calzo, & Austin, 2013). Gender non-conformity and gender atypicality have also been associated with higher physical and emotional abuse by caregivers (Roberts, Rosario, Corliss, Koenen, & Austin, 2012). Mental health is difficult to sustain in the face of caregiver abuse and peer bullying and victimization (Aspenlieder, Buchanan, McDougall, & Sippola, 2009). Indeed, gender non-conforming and gender atypical youth are at higher risk of depression, anxiety and suicidality in adulthood (Alanko et al., 2009).

It is tempting to speculate that these groups of young people, searching for homophily (i.e., like peers) started to exaggerate their points of difference from their gender-conforming peers rather than to hide and minimize them to avoid being bullied and excluded. In so doing, they left the “outgroup” of nonconformers and formed an ingroup of extreme gender-nonconformers, transcending the gender barrier altogether and declaring themselves transgender. Suddenly, the discomfort and fear of not being gender typical becomes a virtue and rather than fearing the disapprobation of their peers, their open revolt in declaring themselves transgender is valorised by a politically powerful transactivist lobby. One would expect that gender atypical children who feel both internal and external pressure to be gender conforming would experience greater discomfort (Carver, Yunger, & Perry, 2003) and therefore be more susceptible to the message of trans activism.

Ingroups behave in stereotypical ways with respect to outgroups – they favour ingroup characteristics, assigning more positive attributes to its members and derogating outgroups in order to enhance the status of their ingroup (Leyens et al., 2000). It is not surprising, then, that members of the transgender ingroup exaggerate the characteristics of the “trans” gender they take on – becoming more “feminine” or “masculine” than heteronormative groups of cismen and ciswomen. Transactivist groups have proliferated and consolidated in a short time frame by exploiting the characteristics of ingroups and outgroups. For example, social



projection (i.e., the belief that other members of the group are similar to oneself) has been a powerful integrating process that simultaneously creates protection for its own members and distance from outgroup members, using the formula, “if you are not with us, you are against us” – those disagreeing with the ideology of the trans-lobby are labelled “transphobic” and publicly denounced.

## (ii) Rapid onset gender dysphoria (ROGD) and the role of social media

The upsurge in rapid onset gender dysphoria (ROGD) tends to occur mostly in girls at around the age of 14 years, which is an age identified by developmental psychologists to be particularly susceptible to peer influence (Steinberg & Monahan, 2007). For example, a study of peer contagion for risky behaviours found that exposure to risk-taking peers doubled the amount of risky behaviour in middle adolescents, increased it by 50% in older adolescents and young adults, and had no impact on adults (M. Gardner & Steinberg, 2005). This group of young people were likely to belong to peer groups in which one or more of their friends had become gender dysphoric or transgender identified. Their coming-out announcement to parents also tended to be preceded by recent increases in their daughters’ social media and internet usage. It is only a small step to understanding the social contagion of ROGD in this age group.

Lisa Littman (2018) canvassed the perceptions of parents who had children who displayed ROGD during or just after puberty. There were 256 respondents, of whom 83% had daughters, with a mean age of 15.2 years when they declared themselves transgender, 41% of whom had previously expressed a non-heterosexual sexual orientation, and 62.5% of whom had received a diagnosis for a mental health disorder (e.g., anxiety, depression) or a neurodevelopmental disability (e.g., autism spectrum disorder). Thirty-seven percent (37%) of these young people belonged to peer groups with other members identifying as transgender. Parents also reported a decline in their child’s mental health (47%) and relationship with parents (57%) after declaring themselves transgender. Thereafter, they preferred transgender friends, websites, and information coming from the transgender lobby.

An indicative case study was written up in an article for *The Atlantic* by Jesse Singal (2018), in which a 14-year-old girl decided she must be trans because she was uncomfortable with her body even after she restricted her food intake, was finding puberty uncomfortable, had

difficulty making friends, was feeling depressed and was lacking in self-confidence. Against this backdrop of woes, she came across MilesChronicles<sup>8</sup>, the website of an omnipotent and histrionic transboy, now a young transman. Watching this video resulted in Claire pouring all her sadness and unease about herself into the “realisation” that she was really a “guy.” Miles made transitioning appear easy and simple, was effusive in his praise of his new self and supportive of others to follow suit. This is a very common scenario reported by parents of teenage girls with ROGD.

Such websites, all easily accessible to vulnerable adolescents, can have a very persuasive effect on viewers. Recent studies show that contagion is enhanced when the influencer is perceived to have high credibility and reduced when the influencer is perceived to have low credibility. A similar effect is observed if the influencer belongs to an out-group or an in-group (Andrews & Rapp, 2014). Miles is the quintessential trans pinup icon with a “You can be just like me if you transition!” message.

Following YouTube posts and social media with respect to the transgender debate over the past few years, I have noticed that posts that depict young people struggling with their gender identity or questioning their decision to take puberty blocking agents and cross-sex hormones, or to undergo what is euphemistically called sex reassignment surgery are rapidly taken down so that only a homogenous message that matches the strident messaging of the transactivist lobby is on display in the ether.

A recent Swedish study<sup>9</sup> tracked referrals and attendances at gender clinics of young people following major media events related to transgender health care in 2019. One event was positive, and two media events [i.e., the airing of “The Trans Train and the Teenage Girls,”<sup>10</sup> a 2-part documentary series broadcast on April 3, 2019 (event 2), and October 9, 2019 (event 3)] determined as negative portrayed gender transition as dangerous and damaging. In the three months following one of the negative media events, referrals decreased by 25% overall – there was a 32% reduction in female referrals - and by 25% for young people aged 13-18

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<sup>8</sup> [MilesChronicles - YouTube](#)

<sup>9</sup> Indremo, M., Jodensvi, A. C., Arinell, H., Isaksson, J., & Papadopoulos, F. C. (2022). Association of media coverage on transgender health with referrals to child and adolescent gender identity clinics in Sweden. *JAMA network open*, 5(2), e2146531-e2146531.

<sup>10</sup> . Mission: Investigate. The trans train and the teenage girls. Tranståget och tonårsflickorna. Video in Swedish. Swedish Public Service Television Co. April 3, 2019. Accessed December 28, 2021. <https://www.svtplay.se/video/21717158/uppdrag-granskning/uppdrag-granskning-sasong-20-avsnitt-12>

years. On the contrary, increased positive media coverage of trans issues resulted in an increase in referrals to gender clinics<sup>11</sup>.

Nonetheless, a statement released in August 2021 by the Coalition for the Advancement & Application of Psychological Science (CAAPS)<sup>12</sup> called for the elimination of the use of Rapid-Onset Gender Dysphoria (ROGD), “given the lack of rigorous empirical support for its existence,” although this evidence abounds (see next section on empirical evidence). Deplorably, CAAPS did not see fit to question the exponential increase in the adolescent trans phenomenon, both in declarations and referrals to gender clinics across the globe<sup>13</sup> nor how these new referrals differed substantially in profile from previously recorded demographics of transgender young people along dimensions of age of onset, sex ratio, comorbid mental health issues<sup>14</sup> and clustering.

## EMPIRICAL EVIDENCE

In recent decades, there has been an unmistakably sharp increase in the population estimates of young people identifying as transgender. A retrospective analysis<sup>15</sup> (Figure 5) of the pattern of referrals to gender clinics from 1976 to 2011 is instructive in demonstrating the shifting

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<sup>11</sup> Pang KC, de Graaf NM, Chew D, et al. Association of media coverage of transgender and gender diverse issues with rates of referral of transgender children and adolescents to specialist gender clinics in the UK and Australia. *JAMA Netw Open*. 2020;3(7):e2011161. doi:10.1001/jamanetworkopen.2020.11161

<sup>12</sup> <https://www.caaps.co/rogd-statement>

<sup>13</sup> de Graaf, N. M., Giovanardi, G., Zitz, C., & Carmichael, P. (2018). Sex ratio in children and adolescent referred to the Gender Identity Development Services in the UK (2009–2016) [Letter to the Editor]. *Archives of Sexual Behavior*, 47, 1301–1304;

Frisén, L., Söder, O., & Rydelius, P. A. (2017). [Dramatic increase of gender dysphoria in youth]. *Lakartidningen*. Retrieved from <http://lakartidningen.se/Klinik-och-vetenskap/Klinisk-oversikt/2017/02/Kraftig-okning-av-konsdysfori-bland-barn-och-unga/>.

Kaltiala-Heino, R., Sumia, M., Työläjärvä, M., & Lindberg, N. (2015). Two years of gender identity service for minors: Overrepresentation of natal girls with severe problems in adolescent development. *Child and Adolescent Psychiatry and Mental Health*, 9, 9.

<sup>14</sup> Aitken, M., Steensma, T. D., Blanchard, R., VanderLaan, D. P., Wood, H., Fuentes, A. ... Zucker, K. J. (2015). Evidence for an altered sex ratio in clinic-referred adolescents with gender dysphoria. *Journal of Sexual Medicine*, 12, 756–763.

Ashley, F. (2019). Shifts in assigned sex ratios at gender identity clinics likely reflect changes in referral patterns [Letter to the Editor]. *Journal of Sexual Medicine*, 16, 948–949.

Becker, I., Gjergji-Lama, V., Romer G., & Möller, B. (2014). Characteristics of children and adolescents with gender dysphoria referred to the Hamburg Gender Identity Clinic [German]. *Prax Kinderpsychol Kinderpsychiatr*, 63, 486–509.

Littman, L. (2018). Parent reports of adolescents and young adults perceived to show signs of a rapid onset of gender dysphoria. *PLoS ONE*, 13(8), e0202330.

<sup>15</sup> Wood, H., Sasaki, S., Bradley, S. J., Singh, D., Fantus, S., Owen-Anderson, A., ... & Zucker, K. J. (2013). Patterns of referral to a gender identity service for children and adolescents (1976–2011): age, sex ratio, and sexual orientation. *Journal of Sex & Marital Therapy*, 39(1), 1-6.

patterns of presentations of young people to gender clinics. The sample comprised 577 children aged 3-12 years and 253 adolescents aged 13-20 years. Prior to around 2000, the child referrals greatly exceeded referrals of adolescents. After that time, there was a steep and significant increase in adolescents. Also of interest is that the overall sex ratio of male to female children was 4.5:1 (boys:girls). For three-year-olds the ratio was 33:1 (boys:girls). The ratio dropped to 3.4:1 in the last cohort of children (2008-2011). The adolescent sex ratios were at parity but by 2008-2011 girls exceeded boys.

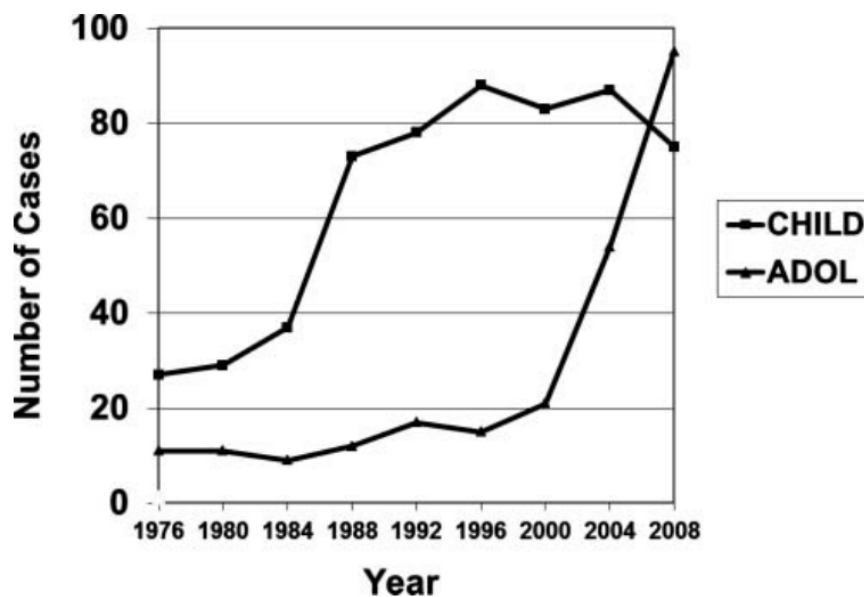


Figure 5 Number of children and adolescents referred to gender clinics 1976-2011)

For the adolescents in this study, data on sexual orientation were available for 248 participants. Using standardized measures<sup>16</sup> to assess heteroerotic and homoerotic sexual orientation in fantasy, 76% of the girls were classified as homosexual compared with 57% of boys. These figures vastly exceed population estimates of homosexuality and begs the question as to whether many young people presenting to gender clinics are confused about their sexual orientation, experience socialized and/or internalized homophobia or do not understand the difference between gender identity and sexual orientation.

<sup>16</sup> Zucker, K. J., Bradley, S. J., Owen-Anderson, A., Kibblewhite, S. J., Wood, H., Singh, D., & Choi, K. (2012). Demographics, behavior problems, and psychosexual characteristics of adolescents with gender identity disorder or transvestic fetishism. *Journal of Sex & Marital Therapy*, 38, 151–189.

Another study, a meta-regression of population-based probability samples provides compelling evidence of this trend, where estimates have more than doubled in the space of eight years from 2007 to 2015 (See Figure 6).

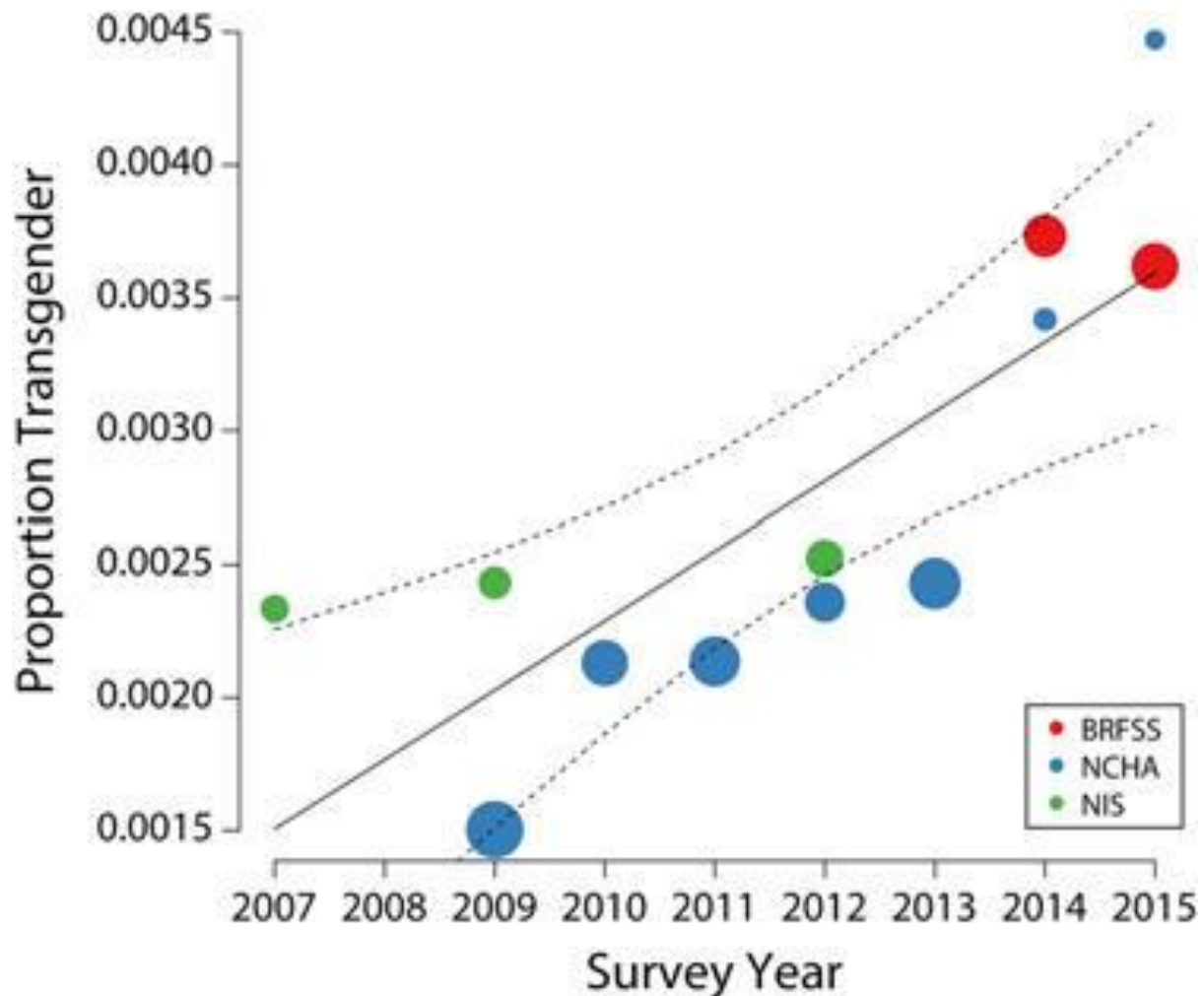


Figure 6<sup>17</sup> [Source: Meerwijk & Sevelius (2017)]

Similarly, upward trajectories of enrolments in GD clinics have been observed in the UK and Australia. Figure 7 summarizes the trends.

<sup>17</sup> Meerwijk, E. L., & Sevelius, J. M. (2017). Transgender population size in the United States: a meta-regression of population-based probability samples. *American Journal of Public Health*, 107(2), e1-e8. <https://ajph.aphapublications.org/doi/pdfplus/10.2105/AJPH.2016.303578>

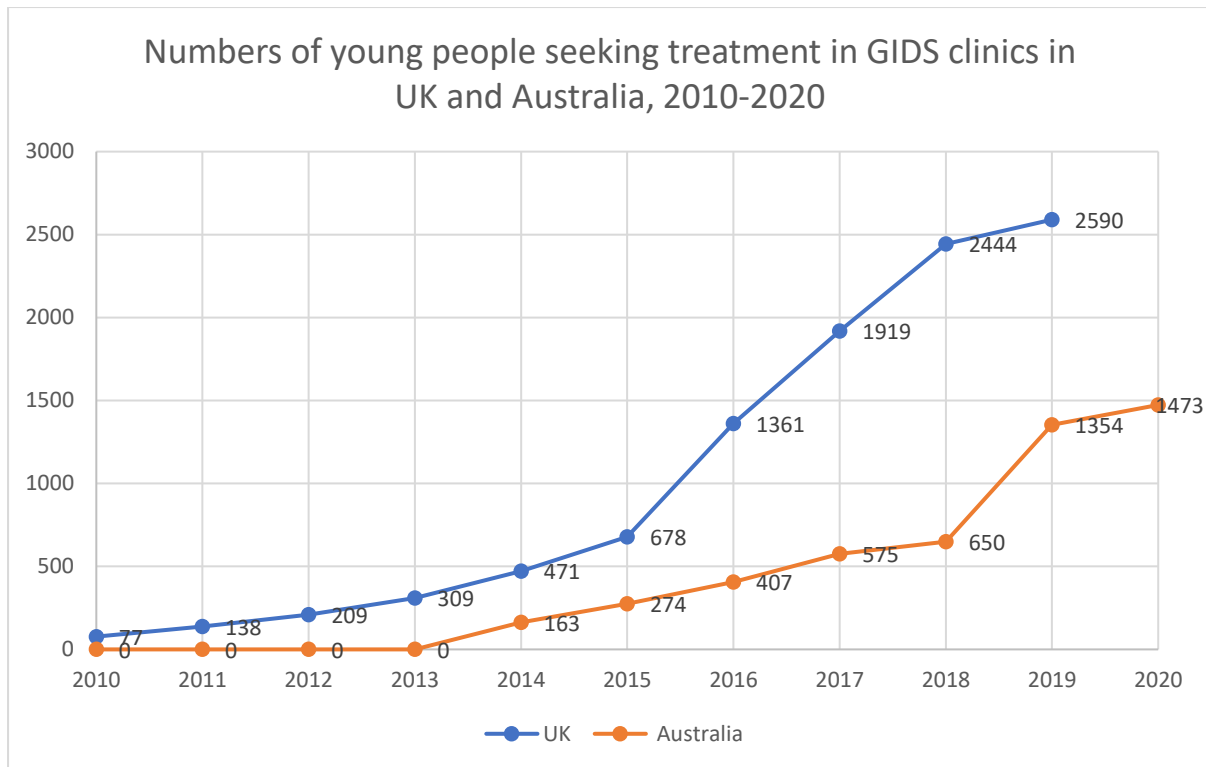


Figure 7

Source: Kenny, D.T. (2021). Australian data provided by the gender clinics under freedom of information applications

Perusal of the UK graph indicates a doubling of the number of referrals in 2015-2016 compared with the previous year. There is a continuous, but less steep increase until 2017, which is followed by a slowing of referral growth rates between the two years 2017-2018 and 2018-2019.

In each of these samples, these numbers would comprise two groups of young people, a core group of “actual” cases and the additional cases created by social contagion. Within the actual cases, there would be the group who declared themselves and a group of latently gender dysphoric young people who have not felt able to declare themselves until recently because of greater community acceptance and support from the transgender lobby and social media. This latter group of “actual” cases and the ROGD group have both been affected by social contagion.

Further analysis is required to determine the nature of the clustering of these increased numbers. In school-aged children, one would expect to see multiple cases in particular high schools. If gender dysphoria referrals occurred independently of each other, one would

expect to see referrals per high school follow a Poisson distribution, in which the variance is equal to the mean. A clustering effect would be hypothesised if the variance were greater than the mean. The strongest indicator of social contagion would occur if the ROGD young people showed strong clustering effects. Evidence that this may in fact be the case is provided by the distribution of new referrals by age and sex in the GIDS sample (Tables 2 and 3), where new referrals in the 12–16-year group far exceeds those in younger and older age groups.

Table 2 Age at referral to GIDS, UK in 2018-20

Age at referral	Number of referrals
3 and 4	10
5	21
6	21
7	42
8	34
9	43
10	59
11	78
12	135
13	331
14	511
15	529
16	474
17	88
18	30

Source: NHS (2019)

Age groups segmented by sex show much larger proportions of females seeking gender transition – for 13-year-olds, girls accounted for 86% of referrals, for 14-year-olds, girls accounted for 82% of referrals and for 15-year-olds girls accounted for 76% of referrals.

Table 3 GIDS figures from England by sex at birth

Age	2019-20, England only		
	Assigned sex at birth		
	AFAB	AMAB	Not Known
3 and 4	<5	<5	0
5	5	12	0
6	7	9	0
7	13	16	<5
8	17	24	<5
9	24	21	<5
10	22	32	0
11	52	23	6
12	127	37	5
13	270	45	11
14	404	90	16
15	470	152	31
16	350	162	24
17	101	67	10
18+	30	28	<5

Data from Australia (Figure 8) also show an upward trajectory in the number of children enrolled in gender clinics in the five states of Australia that offer a gender service over the period 2014-2020.

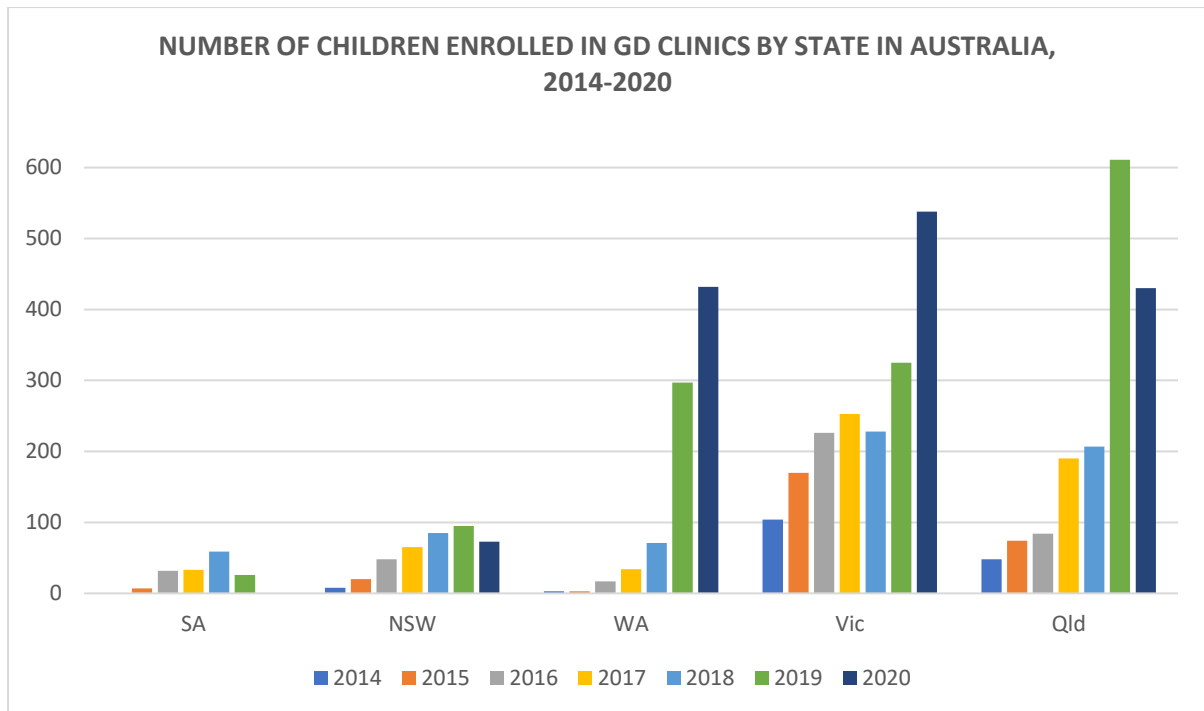


Figure 8

Source: Kenny, D.T. (2021). Data provided by the gender clinics under freedom of information applications

The noteworthy feature of this graph is that three states (WA, Queensland and Victoria) show similar increases over the five-year study period (2014-2020), although Queensland showed a downturn in 2020. While figures in NSW increased, the magnitude of absolute numbers was significantly lower than for the other states. Overall, Victoria had the largest numbers. It is also a state where the trans lobby has been particularly vocal, where the concept of the “safe schools” policy was conceived and implemented, and where the gender clinic at the Royal Children’s Hospital, Melbourne has assumed the mantle of trailblazer in the gender transition enterprise in Australia.

Figures from the Nordic countries<sup>18</sup> show very similar patterns as those described above. See for example, Figure 9 below.

<sup>18</sup> Kaltiala, R., Bergman, H., Carmichael, P., de Graaf, N. M., Egebjerg Rischel, K., Frisen, L., ... & Waehre, A. (2020). Time trends in referrals to child and adolescent gender identity services: a study in four Nordic countries and in the UK. *Nordic Journal of Psychiatry*, 74(1), 40-44.



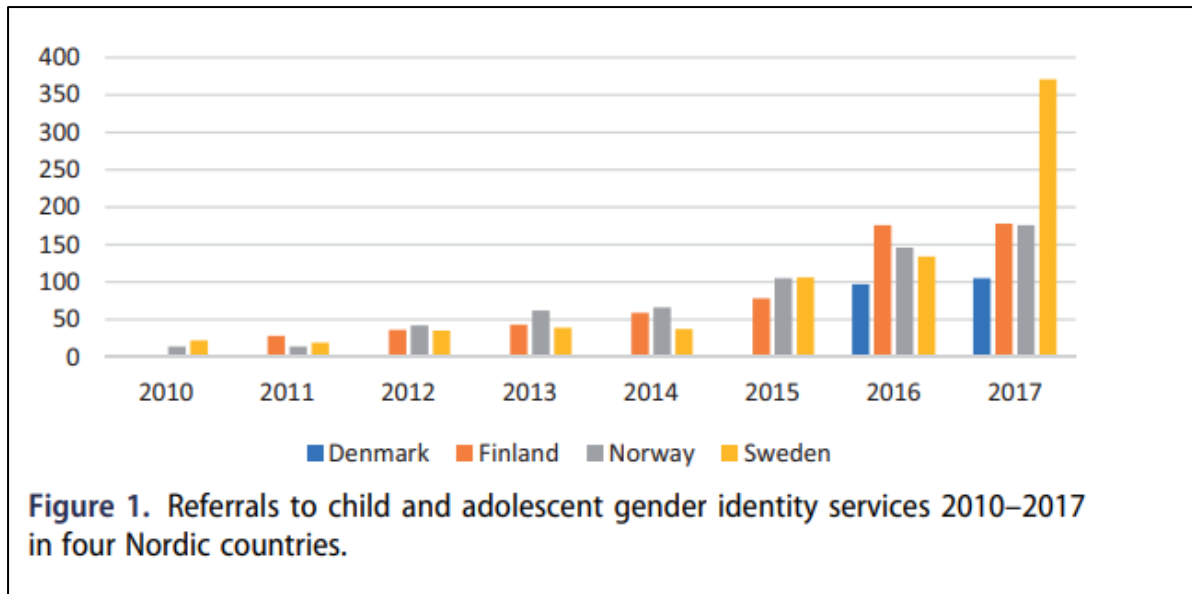


Figure 9

Table 4<sup>82</sup> shows the dramatic increases in just a six-year time frame between 2011 and 2017 in the four Nordic countries and the UK (for comparison).

**Table 1. Population adjusted numbers of referrals to gender identity services for minors in four Nordic countries and the UK in 2011 and 2017.**

	2011	2017
Denmark <sup>a</sup>	–	9.0/100,000 (1/11,000) <sup>c</sup>
Finland	2.63/100,000 (1/38,071) <sup>b</sup>	16.7/100,000 (1/10,155)
Norway	1.24/100,000 (1/80,643)	15.6/100,000 (1/6414)
Sweden	0.90/100,000 (1/111,663)	17.4/100,000 (1/5719)
UK	1.25/100,000 (1/79,588)	17.5/100,000 (1/5078)

These population adjusted rates are orders of magnitude higher than those observed in transgender adult populations<sup>19</sup>. Rapid changes in any relevant biological factors that could possibly account for these trends across global populations appears both unlikely and implausible.

Figure 10<sup>20</sup> shows the total number of young people taking puberty blockers and cross-sex hormones over the seven-year study period across Australia.

<sup>19</sup> Zucker KJ. (2017). Epidemiology of gender dysphoria and transgender identity. *Sex Health*, 14(5):404–411.

<sup>20</sup> NSW supplied “0” in each data cell for each of the seven years. A follow-up inquiry to Sydney Children’s Hospital Network (Ref No: SCHN18/7854, 6/8/19) indicated “Sydney Children’s Hospitals Network (SCHN) does not provide cross sex hormones at The Children’s Hospital at Westmead. [O]ccasionally SCHN sees a patient in a cross-over transition phase who has had stage two treatment initiated by an adult physician, as The Children’s Hospital at Westmead pharmacy is still providing the patient’s treatment in that cross-over phase. However,

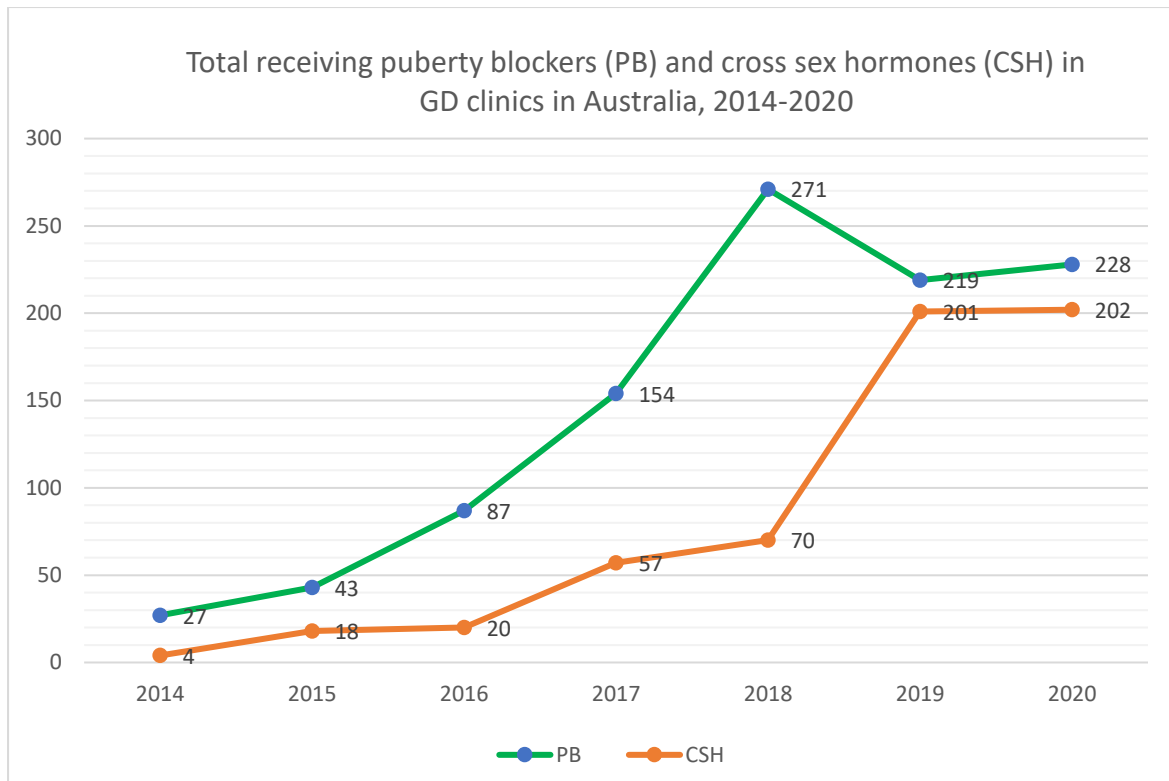


Figure 10

Source: Kenny, D.T. (2021). Data provided by the gender clinics under freedom of information applications

Finally, in case we are left in any doubt about why these numbers have been rapidly increasing over the past 10-15 years, Figure 11 shows the increase in the number of gender clinics across the USA in the past 15 years, from 2007 to 2022.

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their primary care at this stage is under the adult physician who prescribes the stage two therapy. The zero-response provided in the GIPA Notice of Decision is correct but that there may be instances in which children are receiving active stage 2 treatment elsewhere while still attending The Children's Hospital at Westmead clinic".

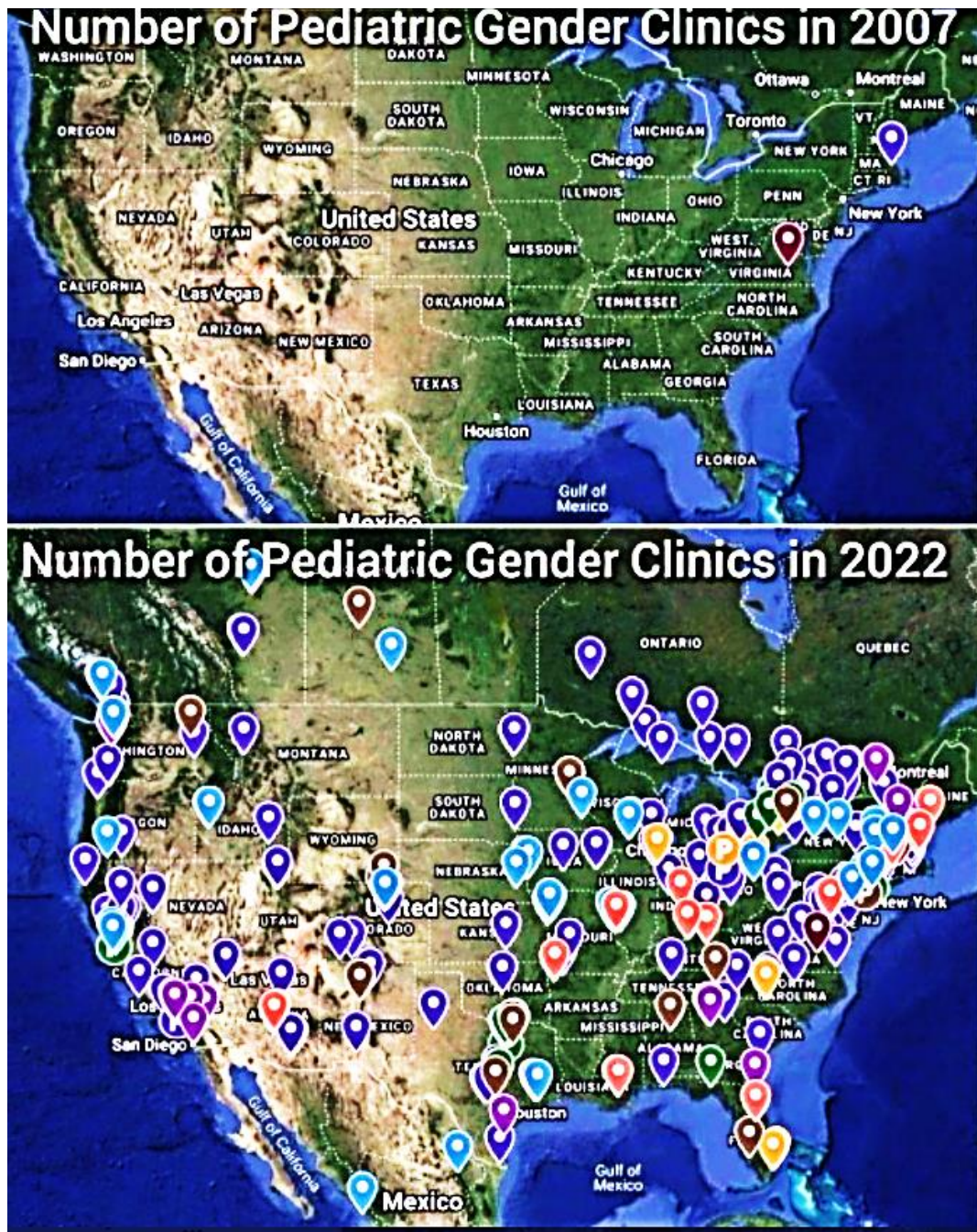


Figure 11 Number of gender clinics in USA and Canada in 2007 and 2022.

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## CHAPTER 2

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### THERAPY FOR TRANSGENDER DECLARING ADOLESCENTS

#### Abstract

In this chapter, I present a detailed account of exploratory psychotherapy with an adolescent and a number of case studies of young people whom I have treated for gender dysphoria. Through respectful engagement, building of the therapeutic relationship and establishment of rapport and safety, these young people gradually reveal their developmental struggles and strivings, their complex and conflicted interpersonal relationships and growing understanding of their own intrapsychic process that will hopefully equip them to make informed decisions about their lives when they reach the age of majority. To deny young people the opportunity to engage in exploratory psychotherapy when they declare a transgender identity would risk exposing them to iatrogenic harm, which they may come to deeply regret. First, I present a detailed case study demonstrating how family, developmental history and social influences intersect in the formation of a transgender identity. I then present summaries of other cases to demonstrate how factors such as developmental psychopathologies and struggles with sexual orientation problematize young people's endeavours to understand themselves.

#### INTRODUCTION

The Cass Review<sup>21</sup> into the GIDS (Gender Identity Development Services) in the UK concluded:

Primary and secondary care clinicians have reported to the Review that they are nervous about seeing children and young people with gender-related distress because of lack of evidence and guidance about appropriate management, and the toxicity of the societal debates. Some clinicians also reported feeling unable to undertake the process of assessment and differential diagnosis that would be the norm in their clinical practice because they perceived that there is an expectation of an unquestioning affirmative approach. They felt that this was at odds with a more open and holistic evaluation of the factors underpinning the young person's presentation, and consideration of the full range of possible support and treatment options.

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<sup>21</sup> <https://www.bmj.com/content/376/bmj.o629>

The report also acknowledges that received medical wisdom about the treatment of young people with gender dysphoria is inappropriate and inapplicable to the young ROGD people currently presenting to gender services, in particular adolescent females who are now accepted to be influenced by the forces of social contagion. These include those with mental health issues, various forms of neurodiversity, and those from dysfunctional and disrupted families.

In a sample of 56 children appearing before the Family Court in Australia for permission to proceed to cross sex hormones, 25 of 39 cases in which family constellation could be discerned lived in single parent families or foster care, with only 14 from two parent families. In this same group of 56 children, 50% had a diagnosed psychological disorder, including six with autism spectrum disorder (ASD), major depression, anxiety, oppositional defiance disorder (ODD), ADHD, or intellectual disability. A recent study has shown a higher prevalence of gender dysphoria in those with ASD<sup>22</sup>.

In a sample of 105 gender dysphoric adolescents and using the Diagnostic Interview Schedule for Children (DISC), anxiety disorders were found in 21%, mood disorders in 12.4%, and disruptive disorders in 11.4% of the adolescents. Males had greater psychopathology compared with females, including comorbid diagnoses<sup>23</sup>.

### Case studies from the public domain

In the early stages of attempting to understand young people identifying as transgender, I studied a large number of publicly available posts that young people had shared on the internet. Close reading of these scripts assisted my own theorizing about the psychodynamics of the transgendering process. Here are some examples:

#### *Alex*

Alex (a biological female), aged 12, petitioned the Family Court of Australia to permit her to transition. The Court made orders allowing the commencement of puberty-suppressing

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<sup>22</sup> van der Miesen, A. I. R., Hurley, H., Bal, A. M., & de Vries, A. L. C. (2018). Prevalence of the wish to be of the opposite gender in adolescents and adults with autism spectrum disorder. *Archives of Sexual Behavior*. doi: 10.1007/s10508-018-1218-3

<sup>23</sup> de Vries, A.L.C, Doreleijers, T. A. H., Steensma, T. D., & Cohen-Kettenis, P. T. (2011). Psychiatric comorbidity in gender dysphoric adolescents. *Journal of Child Psychology and Psychiatry*, 52(11), 1195-1202. doi:10.1111/j.1469-7610.2011.02426.x

hormone medication because of the intense distress Alex felt at her emergent feminine body. At 17, the Court granted permission for a double mastectomy. Psychiatric evidence indicated a traumatic childhood, in which Alex's mother rejected her completely. However, she had a close and idealised relationship with her father, who wanted her to be a boy and who treated her as such, even teaching her to urinate in the standing position. He died suddenly when Alex was six. Psychiatric evaluation revealed significant early trauma and concluded that "Alex's cross-gender identification appears to have emerged in the context of an idealised, physically close relationship with her father, rejection and abandonment by her mother, and her father's desire for her to be a male ... Her investment as male simultaneously expresses anger towards her mother and maintains closeness with her dead father... in the context of her incomplete mourning for him"<sup>24</sup>.

#### *Ariel*

Ariel, transfemale, aged 13, who had commenced puberty blockers, insisted on being called by the name of a different Disney princess every day, until she settled on the name, Ariel:

I remember... when everyone was talking about having babies and it really makes me upset. I don't want to tell them to stop talking about it... but it hurts my feelings when they're talking about it... I am like a girl, but can I have the pain of labour? For a lot of people, it is hard for them to understand, but I don't want to burden them with that. Sometimes I just walk away and sometimes I try to get into the conversation, but it's hard". Her remarkably perceptive friend then says, "You can get so close to being a girl but you can't get to that exact point. Is that what upsets you?" Ariel says "Yeah, that's exactly how I feel, the thing with having a baby, I can never be fully there. It is a natural thing that happens. I buy a bra but it's not to hold in my boobs – it is an illusion. It felt like an act, so I feel lost sometimes"<sup>25</sup>.

Ariel articulates her lived experience of impersonating a girl rather than becoming one or being one. None of the culturally feminine ideals and products with which she surrounds

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<sup>24</sup> Kissane, K. (2009). Young people, big decisions. Retrieved 21 May 2018, from <https://www.smh.com.au/national/young-people-big-decisions-20090504-arxc.html>

<sup>25</sup> (<https://www.youtube.com/watch?v=sTfQ44HFu6k>)

herself can fully convince her that she is female. She acknowledges that it is an “illusion”, “an act”, and she feels “lost” that a true gender identity eludes her.

*A transmale (unnamed)*

A transmale, aged 13, had this to say about the role of the internet in his “coming out as trans”:

The internet is the best place for trans people, it is the best place you can go to if you are scared about talking to anyone. TUMBLR Oh, My God! TUMBLR! Youtube too. That’s how I found out that I was trans – it was from a youtube video<sup>26</sup>...

This young person appeared to have no caring, empathic adult with whom to share his identity/gender confusion and turned to the internet to seek out like minds, that is, to find his “true” in-group. Seeking and finding membership in a valued in-group enhances self-esteem and feelings of belonging and affiliation (Buck, Plant, Ratcliff, Zielaskowski, & Boerner, 2013). Feeling alienated and marginalised in the “real” world, the virtual world of the internet appears to provide a substitute community missing in the child’s real world. However, there is no opportunity to reality-test in such a process, and this young person may have commenced down a dangerous path in order to experience social inclusion. One can also characterize this process as social contagion, since it is likely that the transgender in-group comprise members who are also seeking inclusion and validation in an in-group. For another example of this process<sup>27</sup>, in which a young boy says that the internet is “hugely important” particularly when parents are disapproving.

*John*

John, age 16, transmale,

For as long as I can remember, I always felt male. I did come out to my parents as lesbian, sometime around seventh grade. I thought, “Oh well, I seem to wear boys’ clothes all the time, I feel masculine, and I realise that I like girls, so then I thought, “OK, I must be a lesbian. That was tough. My dad, he wouldn’t have any part of it. He said, “This is not a world that you are going to be a part of.” Then, when I got to my

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<sup>26</sup> <https://www.youtube.com/watch?v=sTfQ44HFu6k>

<sup>27</sup> <https://www.youtube.com/watch?v=eYOuggoxAik>

freshman year, I identified as trans, so I came out to them again as a transmale. I always had a hard time making friends. I was a very strange kid. I would just feel bad because every day I went to school, I felt like everybody wanted me to go; nobody wanted me there. One of the girls said, “Man, you are an ugly dyke. You are a lesbian.” I went from shaky, to unstable, to almost impossible. I started drifting off to a very violent place in my head. I had thoughts of harming my family. It got so bad, I felt like a threat to my family, and to myself. One night, I went down to my mom and said that I wanted her to take me to a hospital; I wanted to get locked up.

This transcript demonstrates the confusion experienced by some young people with gender dysphoria as to their sexual orientation and gender identity, with some believing they are transgender when they are in fact homosexual/lesbian. Existing theories of transgender also conflate these two dimensions, based as they are on a “coming out” model developed for people with lesbian/gay orientations. There has also been a tendency to conflate gender identity with sexual orientation in seeking causal explanations<sup>28</sup>.

From these and my own cases, I developed the following intake assessment.

## INTAKE ASSESSMENT

A very careful intake assessment of every young person presenting with gender concerns needs to be undertaken. I have developed the following:

- i. **Family constellation**, family conflict /dysfunction, marital and sibling dynamics
- ii. **Trauma**, physical, emotional, and/or sexual abuse, attachment disorders
- iii. **Psychological evaluation** – ADD/ADHD, ASD, learning disability, self-harm, suicidality, suicide attempts, anxiety, depression, incipient BPD, and psychosis
- iv. History of **body dysmorphia**, eating disorders

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<sup>28</sup> Katz-Wise, S. L., Budge, S. L., Fugate, E., Flanagan, K., Touloumtzis, C., Rood, B., . . . Leibowitz, S. (2017). Transactional pathways of transgender identity development in transgender and gender-nonconforming youth and caregiver perspectives from the Trans Youth Family Study. *International Journal of Transgenderism*, 18(3), 243-263.

- v. **School life experiences** e.g., attitude towards school, peer rejection, bullying, truanting, academic performance, post school aspirations
- vi. **Cognitive immaturity, concrete thinking, cognitive rigidity, and cognitive distortions**, lack of understanding or misunderstanding of gender ideology and capacity to critically review it (given the illogical and scientifically unsound basis of the ideology)
- vii. Perceptions and misperceptions of **gender roles**
- viii. **Degree to which there is understanding of the gravity and irreversibility of medical/surgical transition**; what gender affirmation treatment entails, and the consequences of treatment (e.g., infertility, sexual dysfunction, complications of cross-sex hormones and surgery, lifelong patienthood, relationship complexity).
- ix. **Sexual experience** history – sexual relationships, sexual abuse experiences, sexual knowledge, sexual anxiety
- x. Emerging awareness of **ego dystonic sexual orientation** - > internalized homophobia
- xi. **Social contagion** (influence of social milieu e.g., schools, gender clinics, internet, online transgender communities)
- xii. **Systemic function of ROGD** e.g., defiance of parents, finding an “in group,” being “seen”, denying the development of their sexed bodies, fear of adulthood, fear of sexual relationships.

## Psychodynamic Formulation

Identity is not hard-wired – it develops in a social world where the young person experiences attachments, trauma, abuse, or misperceives the meaning of experiences because of cognitive immaturity or concrete thinking. Clinicians need to explore identifications (I want to be like...) and dis-identifications (I do not want to be like...) within the family, the peer group, and the social milieu.

The vulnerable (traumatized) part of the self is hated so it is subsumed into the omnipotent self which is the part that suppresses doubts and anxiety and presses for transition. If the traumatized self pushes for recognition of psychic pain, the young person may resort to self-harm and suicidal ideation which is a form of acting out of their self-

hatred against their bodies. Affirming clinicians collude with the patient's own attacks on the traumatized self by "traumatizing" their young patients' bodies with cross-sex hormones and mutilating surgery. In the hope that transition will restore the young person to an ideal state, medics become omnipotent creators of this ideal state. When this fails, the patient sinks into further self-hatred which is enacted through self-harming and suicidal states.

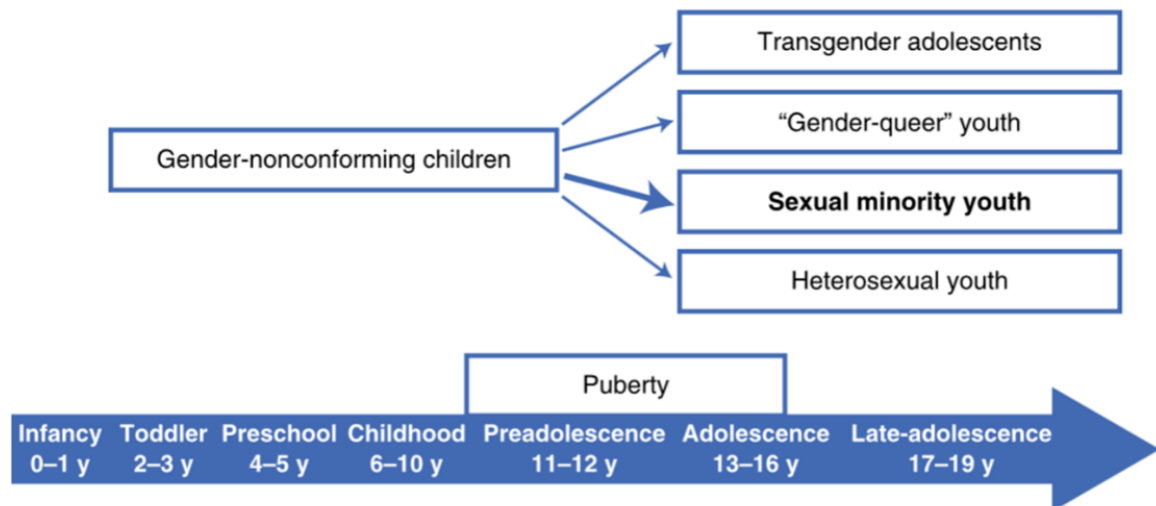
The majority of GD young people have had very limited life experience. For example, they

- i. have had no sexual experience (other than crushes from a distance, hand holding and kissing)
- ii. disdain genital sex as "gross"
- iii. are indifferent to loss of sexual function and fertility, claiming that they never want to have children
- iv. are confused about the nature of "trans" relationships e.g., a self-declared non-binary male (natal sex = male) in a relationship with a transgender declaring natal female (i.e., a trans man) told their parents they were in a gay male relationship. Similarly, two natal females, both transmen, rejected the suggestion that they were a lesbian couple and stated that they were a gay male couple.

It is imperative to keep the developmental path open into adulthood because frontal lobe maturation continues to occur into the early 20s. Further, there are several final trajectories for gender-nonconforming children. The trajectory of gender-nonconforming children varies greatly, and therefore, not all gender-nonconforming children will report persisting gender dysphoria once pubertal changes begin to develop. Prospective studies show that the majority of gender-nonconforming children will report being a sexual minority at some point later in life. An individual child's trajectory may not be known until later in life and it is imperative that this not be disturbed by iatrogenic interference<sup>29</sup>.

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<sup>29</sup> Leibowitz, S. F., & Telingator, C. (2012). Assessing gender identity concerns in children and adolescents: evaluation, treatments, and outcomes. *Current Psychiatry Reports*, 14(2), 111-120



Psychological trauma from the past forms part of one’s psychic structure in the present. The expression of these traumas is socio-culturally embedded, that is, social contagion permits particular forms of “acting out” of these traumas. Envy and rivalry are an integral part of human condition; unconscious envy is a factor in trans identification. GD adolescents need assistance to explore their defences and internal psychic conflicts and to manage their psychic pain before irreparably altering their bodies. “The body is used to act out something that cannot be accepted or processed by the mind.” (Evans & Evans, 2021, Ch 2, p. 28). Clinicians should not collude with the phantasy that the “embodied” self can be altered or removed.

Sexual development poses a threat to young people as it signifies approaching adulthood, the demands of which they feel ill equipped to manage. ROGD may be conceptualized as a “trauma” or a response to the reality of puberty that one now has a sexed body. Rigid adherence to peer norms temporarily assuages vulnerabilities because the young person has found others like him/her who are acting out in the same way. The desire for transition could be:

- i. related to a grievance against the parents and a struggle for autonomy/individuation
- ii. part of a process of identification and disidentification with parents and siblings
- iii. related to an idea that one can create an ideal self
- iv. protective against feelings of inadequacy, anxiety, jealousy, and disappointment
- v. a triumph over feelings of vulnerability
- vi. a repudiation of the sexed body and adulthood



## DEVELOPMENTAL TRAJECTORIES OF YOUNG PEOPLE DECLARING THEMSELVES TRANSGENDER

### Alicia

Alicia was a 14-year-old ROGD adolescent at the time of coming out as trans and starting therapy. She advised her parents that she was a trans male, whereupon they sought therapy for her. Alicia comes from an intact family and is an only child. She has a good relationship with her mother with whom she shares intimate thoughts and feelings and a positive, companionate relationship with her father with whom she shares enjoyable activities. Neither parent is prepared to affirm her, although they have told her that she is loved and wanted. She has been formally diagnosed on the Autism Spectrum, Level 2. Alicia has experienced school refusal, suicidal ideation, depression, peer relationship difficulties, and identity confusion. At the time of writing, Alicia had been in therapy once a week for 18 months. During this time, she had returned to school, recovered from her depression, ceased her suicidal ideation, and started to think about her future.

### *Developmental history*

Alicia's parents had no concerns about her gender development in early childhood. There was one occasion when Alicia was 7 or 8 when told her mother that she wanted to be a boy. She had early puberty at age 10 in grade 4 and this was very unsettling for Alicia, who expressed discomfort with her developing breasts and hips. She wanted to cover up more and changed her clothing preferences.

Alicia was bullied and excluded from peer groups. She moved in and out of peer groups but was frozen out by bullies. She befriended different girls but found out that they did not regard her as a friend – they just allowed her to “hang out” with them. She was “broken hearted”.

Alicia was diagnosed ASD in grade 6. Alicia wanted to get her long hair cut off. She started wearing boys' clothes. She was unhappy with her female genitalia. She started questioning her gender and became hyper focused on the internet – into YouTube, Discord, etc. She told her mother she didn't understand why everyone didn't question their gender. Mother closed off access to Reddit and Tumblr.

At the time of referral, Alicia had an online boyfriend (15) who is gay. She has not admitted to him that she is a girl. She thinks she is in a gay relationship. Mother thinks that she has told him that she is intersex and has male genitalia and that she is trans. Her mood improved once this relationship began. They play Minecraft online together, chat about life. Alicia feels guilty about lying to him about her gender.

In year 7 (the first year of high school) a male student liked her, but she didn't pick up the cues. Another boy tried to get someone to have sex with her. He cornered her in the bushes and invited other boys to "fuck" her. It all got reported to school management, boy was suspended, but Alicia she was severely traumatised. She became suicidal and could not get the incident out of her mind, could not go to that space in the school grounds. One day, she climbed the stairs in a school building with the intention of jumping off, but boy(friend) came and distracted her to go to the library. The school got someone to accompany her to classes to keep her safe. She started to school refuse.

Mother said that suicide became Alicia's "go to" to solve her problems, but she is not unduly concerned about her safety. Her main concern is the GD. Mother sees her as her daughter, cannot use the alternative name or pronouns.

Mother thinks her husband is also on the autism spectrum. He loves Alicia but cannot talk comfortably with her. She rarely goes to him with problems.

#### *First month of therapy*

##### *Session 1*

I have spent three years trying to figure out my gender identity and why I have gender dysphoria (GD). This year, I have found out and feel comfortable. I have told my parents, but they are not taking me seriously. They have barred me from doing stuff that might help me – they don't understand how I feel about my gender. My friends use my preferred name and pronouns (he/him), but my parents refuse.

My relationship with my parents is good except for the gender issues. We are strained over that – I feel isolated around them. I feel I can't go to them. They give me reasons as to why I shouldn't be trans. I am being encouraged not to explore how I feel because

of what my Mum has read. I want to tell them that I feel mistreated by them for not respecting my chosen name and pronouns.

Most of my classmates are not accepting either; they make jokes about trans people, so I am hesitant about using my chosen name and pronouns at school.

I have online friends I feel close to. Two of them know that I am trans and are accepting. Others don't know but I go by my trans name and pronouns online because it relieves my distress. They are struggling with stuff as well.

I started wondering about my gender when I was 10 which is when I started puberty. I felt something was "off" about myself. I tried to understand it by experimenting with different identities and what felt right for me. I explored them all, but nothing felt right, I couldn't stick to one thing. I was all over the place. I knew about trans people while I was trying to figure myself out. At the beginning of 2020, I finally found an identity that I was looking for but then had trouble expressing that and finding acceptance. At one point, I considered myself non-binary (NB), gender fluid (GF), agender. I landed on non-binary because I don't identify as male or female; GF fluctuates between the poles of male and female. But NB didn't feel right either, thinking of myself as other than male or female. GF felt like something that I had to actively think about all the time. "What do I feel like right now – male or female?" Then I decided that trans felt best for me – it felt like I could recognize who I am – I really wasn't comfortable with being female. Saying that I am trans feels right in the sense that I now know who I am.

As a female, I experienced GD, didn't like my female pronouns, within my peer group at school, I felt very disconnected from girls in my classes, slowly gravitated towards having a male peer group, with whom I felt more comfortable. They don't acknowledge my trans status except when they are making jokes about trans people. At school, I still go by my birth name and female pronouns. My male peer group see me as the only girl in their friend group. One of them reads me as more masculine, sometimes uses male pronouns then corrects himself. Secretly, I don't want him to correct himself but none of them know that I am trans.

Some students in class make awful jokes about trans people, making fun of NB people. In a science class we had to classify salts and gases. Some of them related this to trans categories. I had to sit there pretending that I didn't care about what they were saying. I was on the verge of breaking down, so I left to go to the bathroom. I was crying for the last ten minutes of period in bathroom. They were jabs at me personally. They figured I was part of the LGBTQ community.

#### *Second month of therapy*

The only thing that I want at the moment is to transition socially without going through more struggles and to feel more comfortable with myself. I also want to get a binder to feel more comfortable. Mum says no - she says she wants me to be comfortable in my own skin but I can't without doing anything. I wear sports bras and baggy clothing, but sports bras don't help much. My height is a problem because I am short, I am insecure with that. I also have bottom dysphoria – I am distressed at not having a penis. I have to wear loose pants to stop myself from being more aware of it. Having a penis would make me feel more comfortable and more complete.

I am attracted to guys. I have a boyfriend. He knows that I am trans and he genders me correctly. My parents know that I have a boyfriend. He is 15, a year older than me.

I feel vulnerable and distressed at home and school. I would like my parents to be more accepting so that I can come to them with the issues that I am having. I would like to socially transition just in the house, I would feel more comfortable, just around my parents. There wouldn't be too much change. I have a lot of body hair - Mum says that I should shave my legs and armpits, but I prefer not to.

#### *Six months into therapy*

I have had some moments doubting my gender identity, sometimes I feel confused that I am faking it and doing it for attention. It comes and goes. It's quite distressing, I want to tell Mum and Dad that I am having doubts and need some comforting words. It is hard to let them know that I am not trans anymore because when I am doubting it is very hard to stay grounded. It feels like a big swamping feeling that I am overwhelmed by, and it is hard to reach out for comfort to them. I am scared that they might take my doubting as a good thing. Mum is OK with other stuff but not for my

gender dysphoria; we are at opposite ends. We can't see eye to eye. There is a lack of understanding about how I am feeling. I talked to her before about my breast dysphoria. I said to her, "I don't like my breasts." My mother then said, "Well, I don't like having fat legs."

Conversation with mother:

What is worthy of note is that Alicia started taking her bra off to sleep while we were on holidays at the beginning of December, and she has kept doing that. She had refused to do that for about a year. Also, she would always hide her breasts with her arms when in the bathroom, going to the bathroom without clothes on, or whatever, but is no longer doing that since sleeping without the bra. She even unzipped her sun shirt while in the pool, which has not happened for a few years. She had swimmers underneath, but normally would never expose herself that much. Four or five days ago, she was upset, but didn't tell me until after, but said it was to do with gender dysphoria and doubting herself. I didn't want to push her, but I took that to mean she doubted she was trans, and that's what was upsetting her - the thought of not being trans.

*12 months into therapy*

My thinking has changed about the gender issues over time - I feel once again that I am not sure who I am regarding gender. I want to block out everyone else's opinion because it is a life changing issue. Questioning has the potential to be life changing. I am at a point where I feel I have to go through it alone, to avoid multiple opinions. There is no check list that definitively says what you are. I have to step back from everyone and dive deep down into myself to try to know who I am. It is a very tricky experience to try to explain. I feel like I know how I stand, how I perceive myself in terms of gender but there is no way I can know for sure. I might feel one way now and will be treated in a certain way but then I might change my mind.

*Alicia's current summation, 18 months into therapy*

I have decided that I am a nonbinary male, but I am not necessarily male. My gender is neutral – overall, I am in the middle of thinking about it on a spectrum. I feel that I have now landed on something that feels right; it is the best descriptor for me. I

previously considered myself trans FtM but now that doesn't fit. I have made peace with it. I have made peace with the fact that I have been born with a female body. I might not like it, but it is my body and the best I can do is try to feel at home one way or the other in it. When I think about medical transition - I will leave that alone until I am 18 and responsible for my own choices. Hopefully, I would have a firm grasp on who I am by then. Medical treatment is risky for people who are going through puberty, and I am too old now to have puberty blockers, so I have decided to get to the end of this, I mean puberty, being a teenager. I don't want to make irresponsible decisions when I am not mature enough to do so. I think I will eventually start testosterone, but not too rapidly. I want more masculine features/characteristics, but I prefer to appear androgynous, more male leaning androgyny. I want to minimize my overtly feminine features that get to me. I expect to shave but not have a bushy beard, maybe minimal hair on my face. I have never grown any facial hair. I don't like having wide hips or a curvy body. I want bulkier arms and bigger hands. My body is "petite" - I don't like that. I am short and insecure about my height. I am 157 cms - that is short compared to my classmates. I am embarrassed that I am so short compared with my classmates. I feel inferior having to look up to them. In my friend group, I am the oldest but also the shortest. I want more respect.

I asked Alicia whether she will get more respect if she looks more androgynous. She replied:

It is a grey area for me. In terms of feeling respected, I want to feel like myself, like a proper person. Sometimes I am shambling around as some thing and not as any sort of defined me. I really don't like the fact that I have a fanny. I am tolerating the breasts more than the fanny. Having a fanny doesn't feel right or proper. It feels like empty space. It doesn't feel like a part of my body. My ideal body would not include a fanny. I would rather have a willy.

I explained how testosterone would and would not change her body. I told her that it would produce facial hair and a deeper voice but would not increase her height or grow a penis. She was somewhat shocked to hear about these limits of testosterone. She then said, "In that case, I will leave the big decisions until I am 18".

*These statements from this young ASD person highlight how young people's sense of gender changes over time and how dangerous it is for gender clinics to accept their first pronouncements of how they perceive themselves. It also brings into sharp focus the misunderstandings and confusion that can arise. Without careful discussion in a safe space, such misconceptions may never be detected or corrected, and the young person may be left with their erroneous beliefs, the basis upon which they make irreversible decisions about their bodies. It is also noteworthy that a significant proportion (~51%) of young people with ASD express anxiety related to gender while not expressing unhappiness with their biological sex (60%) or a desire to change their biological sex (70%)<sup>30</sup>. It is therefore imperative that anxiety about gender not be used as the determinant for medical interventions in ASD populations.*

### Jared<sup>31</sup>

Below is a two-year history summarizing the gender identity and sexual orientation trajectory of an adolescent male. Apart from his gender questioning, Jared was an otherwise psychologically healthy young person from an intact family. He loved BMX and scouts, was doing well at school, had friends, both male and female, and two older siblings, including a 23-year-old brother who proved a very useful ally and role model in Jared's treatment.

At the age of 14, Jared came out to his parents as GAY. He soon changed that declaration to BISEXUAL when he experienced a powerful crush on a female classmate. After she rejected him, he came out as TRANS and demanded puberty blockade and cross sex hormones.

In therapy, his demands for transition were strident and incessant. He constantly asked me when I was going to tell his parents that he was competent to give consent and could therefore proceed with his transition.

He shaved his legs, arms, and body hair, grew his hair long, and started to wear eye makeup and nail polish. He ordered female clothing from the internet and wore it secretly in his room. When his parents confiscated these clothing items, his female friends from school lent him

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<sup>30</sup> Adesman, A., Brunissen, L., & Kiely, B. (2020). Characterization of Gender-Diverse Expressions and Identities among Youth with Autism Spectrum Disorders. *Pediatrics*, 146(1\_MeetingAbstract), 302-303.

<sup>31</sup> A very similar case has been posted online [https://genderclinicnews.substack.com/p/florida-warns-doctors-off-gender?r=130uly&s=w&utm\\_campaign=post&utm\\_medium=web](https://genderclinicnews.substack.com/p/florida-warns-doctors-off-gender?r=130uly&s=w&utm_campaign=post&utm_medium=web)

their clothes to wear until I advised his parents to put a stop to this. Teachers at his school started calling him by his preferred name and pronouns until I advised his parents not to allow this.

He became increasingly hostile towards me because I was not advising his parents to allow him to transition. His parents had told him that they were not prepared to act on his desire to transition until they were advised by me that this was the medically and psychologically sound course of action. I told Jared that such decisions required great care and exploration and that we needed to understand more about his motivation for wanting to transition and what it meant in his life. I explained that I needed to be sure that he understood all the ramifications of such treatment and the fact that some aspects were irreversible. He insisted like so many young transgender declaring adolescents that he didn't care about having sex or children so none of that mattered.

Several months after therapy commenced, while still vehemently protesting his trans-female identity, he wrote a letter to his parents apologising for misleading them. He said he now realised that he was not a trans-female but a DEMIGIRL (denoting partial non-binary, partial female gender identity).

He changed this orientation shortly thereafter to DEMIBOY (denoting partial non-binary, partial male gender identity). He stopped trying to deceive his parents with regards to wearing makeup and nail polish and secretly stashed his female clothing obtained illicitly through the internet (with packages delivered to his friends' houses so that his parents did not suspect) into the recycle bin.

Three months later, he again wrote to his parents, telling them that he was only joking about the whole thing and that they were the only people who had taken it seriously.

I advised his parents to eat humble pie to give their son the opportunity to exit the gender maze without losing face.

The next day, shortly after his 16<sup>th</sup> birthday, he asked his parents to take him for a haircut and to take him shopping for new clothes. He directed them to a barber and a male clothing store. He quietly advised his parents that he now realised that was STRAIGHT.



## SOCIALIZED AND INTERNALIZED HOMOPHOBIA

An adolescent realises that s/he is same sex attracted. Finding this unacceptable, due to parental and/or internalized homophobia, the adolescent reasons as follows: Being same sex attracted is bad and shameful. My parents will reject me if I am gay. If I am a boy attracted to other boys, I must be a girl and therefore need to transition so that my attraction to boys becomes heterosexual.

### Hossein

#### *Sociocultural issues and parental homophobia*

Hossein was aged 15 years when his parents contacted me about their many concerns for their son. He is the elder of two children; he has a nine-year-old sister. The family migrated to Australia from a Balkan country when Hossein was five. They became panicked when Hossein declared that he was transgender and wished to transition immediately.

Hossein was difficult to engage except when talking about his gender dysphoria and pressing his case for transition. He said that his parents were waiting for my assessment before they agreed to any medical treatment. He asked several times each session when I would finish my assessment and advise his parents that he could start taking oestrogen. He was otherwise hard to engage and was sometimes irritated, sleepy, and uncooperative.

Hossein expressed concern about his schoolwork. He had aspirations to study aerospace engineering but was finding senior school maths and physics difficult. He also reported serious attentional problems. I advised his parents to obtain psychometric assessments of his ability, attention, and social skills in order to gain a baseline of his current functioning. Hossein was found to have average intelligence, which was not concordant with his parents' view of him, or his own view, that he was "gifted." I attempted to do some reality testing regarding parental expectations for his academic performance.

Hossein also scored in the clinical range for both attention deficit disorder and autism spectrum disorder. I indicated to his parents that these conditions were priorities for treatment and that the school needed to be informed about the results of psychometric testing in order to better support Hossein at school.

When I explored Hossein's perception of his sexuality and sexual orientation, Hossein disclosed the following:

I see myself as bisexual. I have feelings for guys and girls, more like a pan-thing. I have had a boyfriend who identifies as male and pan since last year. We get together just the two of us - we visit each other's houses. I guess I would be OK with being gay. For me, it fluctuates.

Of his mother, Hossein said:

Mum knows I have this friend. She doesn't know that he is my boyfriend. I don't think Mum will take it well because she asked me if I still liked girls. She wouldn't take kindly to knowing I have a boyfriend.

Of his father, Hossein said:

Dad is trying to suppress his queer phobia, but he says bad things about LGBTQ. He is anti it all; he got angry with me for refuting what he was saying. Dad said gay is about anal sex and that is gross. Then Mum told him to shut up and I went to my room and cried. Dad is anti queer for sure, he tries to suppress it because he still loves me. I felt very disappointed in Dad when he expressed these sentiments. He will be very freaked out if he thinks I am queer, gay, or trans.

This is a [...] family who speak [...] at home. [...] culture is homophobic. In a family meeting, I tentatively prepared his parents for the possibility that Hossein's sexuality may eventually resolve as homosexual and that if that were the case, they would need to resolve their own antipathy to homosexuality in order to support their son.

Declaring oneself transgender in this sociocultural milieu is an attempt to resolve the difficult dilemma of a [...] boy being gay. Sadly, transgender identity is preferred to a homosexual orientation in certain Balkan countries and the Middle East.

Hossein was insistent at various times that he was transgender and was impatient to commence his social transition and to obtain prescriptions for cross sex hormones. He was dismissive of the life changing effects of these drugs on his body, was indifferent to the loss of sexual function, and declared that he was not interested in preserving his sperm for later reproduction because he had no intention of having children. Hossein was cognitively rigid

and evinced concrete thinking when discussing his potential transition. He had researched the “facts” about MtF transition but could not discuss them in a nuanced way or accept the possibility that he may be disturbed by side effects or uncertainties about his course of action. He did not wish to proceed with surgery at this time.

In view of Hossein’s recently diagnosed ADD, ASD, and uncertainty about his gender identity and sexual orientation, I drew the conclusion that Hossein was not Gillick competent and should not be supported to transition at this time, either socially (i.e., changing his name and pronouns) or through cross sex hormones.

The priority for Hossein was to address his ADD and to get support for his ASD. I referred him to a child and adolescent psychiatrist for a medication review for his ADD and depression. The psychiatrist prescribed methylphenidate and antidepressants. I ceased therapy with Hossein as he refused to engage further because I had not supported his transition and had several further sessions with his parents to assist them to address their homophobia and grief that their only son was, in all likelihood, gay.

## Roisin

### *Internalised homophobia*

Roisin is a 15-year-old adolescent attending an exclusive girls’ school. She came out as trans to her mother at the age of 14. It seemed like rather a half-hearted coming out. Roisin had not chosen a new name or pronouns and did not seem particularly interested in exploring her new identity. The only change was that she asked her mother to buy her the alternative school uniform, which consisted of trousers and a shirt instead of a pinafore. This did not trouble mother too much as a significant number of the students had opted for this style of uniform.

Roisin’s presentation was more consistent with body dysmorphia than gender dysphoria. Roisin complained that her hips were too wide, that her thighs were too big and that her face was the wrong shape although she could not be specific about what it was about her normal, symmetrically placed features that were so wrong. Roisin suffered from severe acne for which she was prescribed medication. When her skin cleared up and she appeared in the full bloom of good health, she confided to me that she was not that happy that her skin looked so good. When I inquired why, she replied that now that the focus was taken away from her acne, all

the other “hideous” features of her countenance were in the full glare of the spotlight, and she could not tolerate looking at herself in the mirror or having her photo taken.

Roisin is gifted and had been performing well at school, but teachers had commented recently that she was distracted, disconnected, often “spaced out” and not “with it” in class. She appeared sleepy and often put her head on the desk. In response to a question about how she was sleeping, Roisin responded:

I am having nightmares about events in my life and about what could go wrong. They are most often about peer interactions. I worry about potential issues related to my peers judging me, exposing me as gay. I wake up in a panic about who is talking about me. There are a few girls in my class who won’t shut up about LGBTQ issues. They are really obnoxious and loud, and I always feel as if they are referring to me when they talk about lesbians in a disparaging way. I have thought about asking them not to keep talking about LGBTQ issues all the time, but if I do that, I will be accused of being homophobic. I might risk being ostracized by other girls as well.

Soon after she reported her nightmares, Roisin disclosed that she had been self-harming for about a year.

Sometimes, I come home from school defeated, nothing in particular has necessarily happened, it is just the constant stress of the environment. I tried sitting with the feeling, but it didn't pass, so I got the reed on my clarinet and scraped and cut my waist and hip. It is still red and angry, it was painful, but it is healing. Other times I use scissors and cut the top of my thighs. I only cut where it is not obvious, and no-one will see it.

About nine months into therapy, Roisin confided that she had a powerful crush on a girl at school but would never act on it for fear of rejection by the girl in question, and peer vilification in general. She was very troubled by the intensity of her feelings and asked me whether she was gay.

I had a very open and scientifically oriented discussion with Roisin about female sexual orientation. I explained that sexual orientation in females appears more likely to change over time. I discussed hypotheses regarding the greater sexual orientation fluidity in females

compared with males that are underscored by biologically based sex differences in foetal hormone exposure and socio-political forces that constrain sexual self-concept, expression, and opportunities differently in women and men. I indicated that while she currently felt strongly same sex attracted, her feelings may well change over time. I explained that many adolescents experienced same sex attractions but mostly reached adulthood as heterosexual. I normalized her feelings and explained that she was not inferior, diseased, or immoral if she were, in fact, gay. Roisin was greatly relieved by our several discussions on female sexual orientation and decided that she would like to share this with her mother.

I coached mother about appropriate responding and reinforced what I had already discussed with Roisin in her sessions. Mother was relieved that Roisin no longer thought of herself as trans and was not at all troubled that she may be lesbian. She said:

Being gay is biologically based and does not involve self-mutilation or lifelong patienthood at the behest of the medical profession. There are a number of gay people in our extended family, and all are accepted without question. We do not have a problem with it at all.

The disclosure went well, and Roisin was greatly comforted by her parents' easy acceptance of her declaration. However, she is troubled by possible responses from her peer group should they find out (she has no intention of disclosing to them). She continues to struggle with other aspects of her mental health, including a treatment resistant clinical depression for which she has been medicated unsuccessfully.

**Professor Dianna Theadora KENNY**

Mob: [REDACTED]

E: [REDACTED]

ABN [REDACTED]

*Professor of Psychology (rtd)*

*Consultant Psychologist and Psychotherapist*

Registered psychologist (No. 0005390)

AHPRA number PSY0001136350, specialist endorsements: developmental, educational and counselling psychology

Medicare Provider No 2876971T

*Marriage and Family Therapist* (Relationships Australia)

*Nationally Accredited Mediator* (Australian Dispute Resolution Association)

*Family Dispute Resolution Practitioner* (No. R1005291) (NSW College of Law)

### ABBREVIATED CURRICULUM VITAE

<b>Current</b>	2019 -	Principal, DK Consulting (Psychology, psychotherapy, family dispute resolution, and medico-legal services)
<b>Previous appointments</b>	2013-2019	Hon Professor of Psychology, The University of Sydney
	2006-2013	Professor of Psychology, The University of Sydney
	1988-2006	A/Professor, Senior Lecturer, Lecturer in Psychology, The University of Sydney
	1986-1987	Psychologist in private practice
	1986-1987	Lecturer in School Counselling, School of Counselling and Disabilities Studies, The University of Western Sydney
	1983-1985	Regional Specialist Counsellor for Emotionally Disturbed Children, Liverpool region, Division of Guidance and Special Education, NSW Department of Education
	1978-1983	District School Counsellor, NSW Department of Education
	1976-77	Teacher, Haberfield Demonstration School, Haberfield, NSW

### University Qualifications

1988	Doctor of Philosophy (PhD) (Developmental and Educational Psychology), Macquarie University (School of Behavioural Sciences)
1980	Master of Arts (School Counselling), [M.A. (Sch. Couns.)], Macquarie University (School of Behavioural Sciences)
1974	Bachelor of Arts (Honours - Psychology) [B.A. (Hons)] The University of Sydney

### Other Qualifications

2016	Postgraduate Diploma in Family Dispute Resolution (PG Dip FDR) (NSW College of Law)
2015	Nationally accredited mediation training – Resolution Institute
1986	Diploma in Clinical Hypnotherapy (DCH), Australian Society of Clinical Hypnotherapists

1982	Certificate in Marriage and Family Therapy, Marriage Guidance Council, N.S.W. (now Relationships Australia).
1977	Associate Diploma in piano, Trinity College of Music, London (ATCL)
1975	Diploma in Education, (DipEd) Sydney Teachers' College

### **Registrations and Accreditations**

Psychology Board of Australia (No.0005390)  
Australian Health Practitioner Regulation Agency (PSY0001136350)  
Approved Medicare provider (No 2876971T)  
Nationally accredited Mediator (LEADR, Australian Dispute Centre)  
Family Dispute Resolution Practitioner (NSW College of Law)(Registered with Attorney General Department) (No. R1005291)

### **Membership of professional societies**

Member, Australian Psychological Society: Specialist Accreditations  
    Academic Member, College of Developmental and Educational Psychologists  
    Fellow, APS College of Counselling Psychologists  
Member, American Psychological Society  
Member, Society for Psychotherapy Research  
Member, International Association of Relational Psychoanalytic Psychotherapy  
Elected Member, New York Academy of Sciences  
Member, Australian Dispute Resolution Association  
International affiliate, American Psychological Association

### **Consultancies relevant to psychology and the law, transgender issues in children and adolescents (informed consent, assessment and suitability, family conflict, comorbid conditions), child sexual abuse, sex offending, and sexual misconduct**

Expert report writer, Human Rights Law Alliance  
Expert report writer, Amicus Briefs for cases occurring in Canada and USA  
Expert reviewer/report writer, Office of the Director of Public Prosecutions, Armidale, Gosford, Lismore, Parramatta, Penrith, Sydney, Tamworth, Wollongong  
Expert reviewer /report writer, Crown Solicitors' Office, Sydney  
Expert reviewer/report writer, Victorian Government Solicitor's Office (VGSO)  
Expert reviewer/report writer, Joint Investigative Response Team (JIRT), NSW Police – Blacktown, Chatswood, Coffs Harbour, Manly, Penrith, Tamworth  
Expert reviewer/report writer, Health Care Complaints Commission (HCCC) – NSW, Victoria, and Western Australia  
Expert developmental psychologist, various Barristers chambers  
Assessment psychologist, Aboriginal Legal Service  
Research consultant, *NSW Department of Juvenile Justice*  
Research consultant, *Justice Health NSW*  
Research consultant, *Youth Justice Coalition* (pro bono)  
Research consultant, *Public Interest Advocacy Centre* (pro bono)

Consultant investigative psychologist (of alleged child sexual abuse), *St Joseph's College, Hunter's Hill*  
Consultant psychologist, *Tribunal of the Catholic Church*

***Expert reviewer for Joint Investigative Response Team, NSW Police***

- Provide advice and court reports on cases related to child sexual assault, including reports of historical child sexual abuse
- Appraise the quality and plausibility of disclosures made by complainants in cases of current and historical sexual abuse
- Provide literature reviews and advice on the status of recovered memories, the reliability of childhood memory, and memory processes over time and factors that can alter or affect memories
- Provide advice on language development, children's use of and understanding of sexual language
- Provide expert advice on other matters related to criminal offending against children.
- Provide expert advice on the nature of psychopathologies arising from child sexual abuse

***Expert developmental psychologist for various Barristers chambers, Crown Solicitor, and Office of the Director of Public Prosecutions***

- Provision of expert reports on matters pertaining to child development
  - credibility and reliability assessments of disclosures of child sexual abuse
  - Reasons for delay of disclosures of child sexual abuse
  - memory and language development as it pertains to child sexual abuse disclosures
  - evaluation of "recovered memories"
  - Long term impacts of child sexual abuse
  - Capacity for consent

***Court referred clients***

- In cases of parental alienation, assess the quality and veracity of accusations of emotional, physical and sexual abuse of children in divorcing couples undergoing family court proceedings for custody and access of the children of the marriage, and report these findings to the court.
- Assess parenting capacity in separating and divorcing parents to ascertain child safety and capacity of parents to undertake shared parental responsibility.
- Where mandated by the court, provide assessment, counselling and therapy for accused fathers and report on the alleged risks to their children while in their care.

***Expert reviewer for the Health Care Complaints Commission***

- Investigate complaints against psychologists for malpractice and misconduct, including sexual misconduct, and other conduct that falls below the standard expected of the profession.
- Undertake review and critical appraisal of treatments offered by psychologists and whether those treatments have been collusive, coached, suggestive or in other ways biased with respect to issues of child sexual abuse, including historical sexual abuse.



- Evaluate psychologists' psychological practice, evidence-base for therapeutic interventions, and competence in implementing psychological therapies.
- Undertake file review of documents (letters, submissions, complaints, statements, accounts of therapy, therapy case notes) from complainants and defendants, report writing, participation in conclaves, and court appearances.

### ***Consultant Psychologist to the Tribunal of the Catholic Church***

- Assessment of marriages for annulment
- Assessment of claims of sexual abuse within marriage and non-consummation of marriage, among other relationship issues.

### ***Research on sexual offending in young sex offenders***

- Extensive research undertaken on sexual offending examining life histories and precursors to sexual offending, young offenders' experience of sexual abuse, and other forms of maltreatment for the NSW Department of Juvenile Justice.

### ***Ministerial and other Appointments in Psychology and the Law***

2013 Board Member, Daystar Foundation (a foundation for the provision of vocational training and employment to 'at risk' young people)

2003-2009 Chair, Ministerial Steering Committee, NSW Department of Juvenile Justice Collaborative Research Unit

2003-2009 Member, Ministerial Steering Committee on Sexual Offending, New South Wales Department of Corrective Services

2002 A/Chair, Ministerial Reference Group on Sexual Offending, New South Wales Department of Corrective Services

2001 Member, Ministerial Reference Group on Sexual Offending, New South Wales Department of Corrective Services

2003 COCQOG (Commonwealth Cost and Quality of Government): External Reviewer of Psychological Services and Specialist Programs, NSW Department of Juvenile Justice

1996-2002 Deputy Chair, Ministerial Steering Committee, NSW Department of Juvenile Justice Collaborative Research Unit

1997-2003 Chair, Research and Ethics Subcommittee, NSW Department of Juvenile Justice Collaborative Research Unit

### ***Expertise***

I divide my expertise into five key areas –

- (a) Gender dysphoria (GD) in children and adolescents including a clinical practice working with young people with GD and their parents/families and schools. I bring my decades of experience working with children and families to my practice in working with young people with GD (key areas b, c, d, and e are all relevant to my clinical practice in gender dysphoria).

- (b) Child development – including children’s social, emotional and cognitive development, assessment of children’s attachment to primary care givers, peer relationships, cognitive abilities including intelligence, memory and language; assessment of developmental psychopathologies and behavioural disorders and provision of therapy for same.
- (c) Matters pertaining to child sexual abuse, including the disclosure of child sexual abuse, the impact of sexual abuse on children, historical child sexual abuse and its reporting, and issues of repressed or false memory, grooming by paedophiles, and counter-intuitive behaviour.
- (d) Matters pertaining to school performance and achievement, psychometric assessment of intelligence, assessment in literacy and numeracy and specific learning disabilities.
- (e) Family dispute resolution (I am an FDRP registered with the Attorney General’s Department) in which role I assess alleged offences of one parent against another and/or their children in the context of family court proceedings. I report on issues such as access, parental alienation, and child stress in the context of contested divorce and custody disputes.

**(a) Gender dysphoria in children and adolescents**

I have a busy clinical practice specializing in the treatment of gender dysphoric children and young people, their parents and families. I have contributed invited submissions to government here in Australia and overseas on matters relevant to education policy on transgender declaring children and adolescents and acceptable therapies with which to treat them. I have published in the area and provided expert reports on disputes regarding treatment of gender dysphoric young people whose cases reach the Family Court.

*Key publications (Books, edited books, book chapters, journal articles)*

**Kenny, D.T.** (2020). *Gender dysphoria in children and young people: Collected papers on the psychology, sociology and ethics of gender transitioning*. Germany: Scholars Press.

This book critiques gender dysphoria in young people and its current treatments that include gender affirmation therapy involving puberty blocking agents, cross sex hormones and sex reassignment surgery. I examine the safety of these treatments, evidence of efficacy, capacity of children and young people to give consent to life altering treatments, the social impacts of transgender individuals, particularly in women’s sport, and the social contagion of gender dysphoria.

D’Angelo, R., Syrulnik, E., Ayad, S., Marchiano, L., **Kenny, D. T.**, & Clarke, P. (2021). One size does not fit all: In support of psychotherapy for gender dysphoria. *Archives of Sexual Behavior*, 50(1), 7-16.

Holloway, G., **Kenny, D.T.**, Deves, K., ...Parkinson, P., Morris, P., & Halasz, G. (2021). Australian perspectives on transgenering children and adolescents: Implications for policy and practice. Hobart: Author.

**Kenny, D.T.** (2021). *Opposing the teaching of gender fluidity ideology: The Education Legislation Amendment (Parental Rights) Bill 2020* (pp. 13-22). In Holloway, G., **Kenny, D.T.**, Deves, K., ...Parkinson, P., Morris, P., & Halasz, G. (2021). Australian perspectives on transgenering children and adolescents: Implications for policy and practice. Hobart: Author.

**Kenny, D.T.** (2021). *The social contagion of gender dysphoria: a theoretical and empirical proposition* (pp. 56-70). In Holloway, G., **Kenny, D.T.**, Deves, K., ...Parkinson, P., Morris, P., & Halasz, G. (2021). Australian perspectives on transgendering children and adolescents: Implications for policy and practice. Hobart: Author.

#### *Submissions to government inquiries*

**Kenny, D.T.** (2021). Submission to the NSW Parliamentary Inquiry: Education Legislation Amendment (Parental Rights) Bill 2020.

<https://www.parliament.nsw.gov.au/lcdocs/submissions/70648/0005%20Professor%20Diana%20Kenny.pdf> and

[https://www.parliament.nsw.gov.au/lcdocs/inquiries/2610/Report%20No%2044%20-%20PC%203%20-%20Education%20Legislation%20Amendment%20\(Parental%20Rights\)%20Bill%202020.pdf](https://www.parliament.nsw.gov.au/lcdocs/inquiries/2610/Report%20No%2044%20-%20PC%203%20-%20Education%20Legislation%20Amendment%20(Parental%20Rights)%20Bill%202020.pdf)

**Kenny, D.T.** (2020). Gender development and the transgendering of children. In H. Brunsell-Evans and M. Moore. *The fabrication of the transgender child*. Cambridge: Cambridge Scholars Press.

**Kenny, D.T.** (2020). Submission and invited presentation to the Queensland government Inquiry into the proposed *Health Legislation Amendment Bill 2019* to outlaw conversion therapy.

[https://diannakenny.com.au/images/pdfs/Submission to the Queensland Inquiry into Outlawing Conversion Therapy.pdf](https://diannakenny.com.au/images/pdfs/Submission%20to%20the%20Queensland%20Inquiry%20into%20Outlawing%20Conversion%20Therapy.pdf) and

<https://documents.parliament.qld.gov.au/tableOffice/TabledPapers/2020/5620T328.pdf>

**Kenny, D.T.** (July 2020). Submission to the ACT government into proposed amendments to outlaw conversion therapy.

#### *Clinical guidelines*

Morris, P. .... **Kenny, D.T.**..... (May, 2021). *Managing Gender Dysphoria/Incongruence in Young People: A Guide for Health Practitioners*. National Association of Practising Psychiatrists. <https://napp.org.au/2021/05/managing-gender-dysphoria-incongruence-in-young-people-a-guide-for-health-practitioners/>

#### *Presentations*

**Kenny, D.T.** (2021). *Transgendering our young people: Faulty science, psychic epidemic*. Invited lecture to the Faculty of Medicine, Notre Dame University, Sydney, Australia.

**Kenny, D.T.** (2020). *Affirmation only: Where's the evidence*. Invited presentation to the Catholic Medical and Bioethical Conference, 30 May.

**Kenny, D.T.** (2020). *Is gender dysphoria socially contagious?* Invited presentation to the NSW Parliament Forum on gender dysphoria in our young people, 18 February.

**Kenny, D.T.** (2020). *Transgender “ideology” and the “trans-gendering” of young people*. Invited presentation to the Northern Area Mental Health Network, NSW Department of Health, 12 February.

**Kenny, D.T.** (2019). *Children and young people seeking and obtaining treatment for gender dysphoria in Australia: Trends by state over time (2014-2018)*. Paper presented at the Forum on transgender children and adolescents at the Parliament of NSW, 2 July, 2019.

[Children and young people seeking and obtaining treatment for gender dysphoria in Australia: Trends by state over time \(2014-2018\) - Professor Dianna Kenny](#)

**Kenny, D.T.** (2019). Female sport participation and gender affirmation: A collision course for medical ethics. Invited presentation Melbourne consortium of parents of transgender declaring children. 12-13 October.

[Female sport participation and gender affirmation: A collision course for medical ethics - Professor Dianna Kenny](#)

For other significant contributions to the gender dysphoria debate, go to <https://www.diannakenny.com.au/>

**(b) Child and adolescent development**

- (i) I commenced my professional life as a primary school teacher, then became a school counsellor, and specialist counsellor for emotionally disturbed children with the NSW Department of Education. I held these positions for 10 years before joining The University of Sydney, where I rose to the rank of Professor of Psychology in 2006.
- (ii) I hold a PhD in developmental and educational psychology, a master’s degree in School Counselling, an honours degree in psychology and postgraduate diplomas in education and family dispute resolution.
- (iii) I am a recognised expert in child development. I have designed and lectured in a range of courses at undergraduate and postgraduate levels pertaining to child development including: Developmental psychology; developmental psychopathology; infant and child study (with a focus on language and cognitive development); attachment theory; the psychological and cognitive assessment of children; and the developmental foundations of stress and coping.
- (iv) I have major publications in the area of child development.
- (v) I have provided reports on children to the courts and police, including on issues in child development such as language and cognitive development, childhood memory and its reliability, and adverse experiences that impair normal development such as attachment trauma and environmental risks to safety and security.
- (vi) I am able to provide comprehensive literature reviews on most subjects related to child development.

*Key publications:*

**Kenny, D.T.** (2013). *Bringing up baby: The psychoanalytic infant comes of age*. London: Karnac.

This book examines the development of children, from birth to adolescence. It provides a detailed analysis of all modes of development including cognitive and social development, language development, the development of memory, the role of secure attachments in emotional development and the contribution of developmental neuroscience to our understanding of infant and child development.

**Kenny, D.T.** (2007). *Lifespan development: Theories and research*. The University of Sydney: Author.

This comprehensive manual describes how people develop and change throughout the lifespan, critically evaluates how cultural, historical, and economic factors influence development, presents the major psychosocial, emotional, and cognitive developmental theories, discusses the major controversies in developmental psychology, integrates different theoretical perspectives on development, and applies developmental theory to healthcare practice. It includes a critical review of the methods and research approaches (including genetic, comparative, cross cultural, ethological, and ecological) in developmental psychology and research designs (including cross-sectional, cohort and longitudinal, time lag and sequential).

Schofield, P., Mason, R., Nelson, P.K., **Kenny, D. T.**, & Butler, T. (2018). Traumatic brain injury is highly associated with self-reported childhood trauma within a juvenile offender cohort. *Brain Injury*, DOI: [10.1080/02699052.2018.1552020](https://doi.org/10.1080/02699052.2018.1552020).

**Kenny, D.T.** (2016). The adolescent brain: Implications for assessing young offenders' legal competence. *Judicial Officers' Bulletin* (Judicial Commission of NSW), April, 28, 3, 23-27.

**Kenny, D.T.**, Blacker, S. & Allerton, M. (2014). *Reculer pour mieux sauter*: A review of attachment and other developmental processes inherent in identified risk factors for juvenile delinquency and juvenile offending. *LAWS*, 3, 439–468; doi:10.3390/laws3030439.

**Kenny, D.T.**, & Nelson, P.K. (2008). *Young offenders on community orders: Health, welfare, and criminogenic needs*. Sydney, Australia: Sydney University Press. ISBN 978-0-9804117-0-6.

**Kenny, D.T.** (2001). Cognitive-developmental theory. In Carol Jones (Ed). *Readers' Guide to the Social Sciences Volume 1*, pp. 230-231. London, United Kingdom: Fitzroy Dearborn Publishers.

**Kenny, D.T.** (2001). Nature and nurture. In Carol Jones (Ed). *Readers' Guide to the Social Sciences Volume 1*, pp 1105-1106. London, United Kingdom: Fitzroy Dearborn Publishers.

**Kenny, D.T.** (2000). Psychological foundations of stress and coping: A developmental perspective. In Kenny, D.T., Carlson, J. G. McGuigan, F. J. & Sheppard J. L. (Eds.). *Stress and health: Research and clinical applications*. Ryde, NSW: Gordon Breach Science/Harwood Academic Publishers (pp. 73-104).

**Kenny, D.T.** & Waters, B. (1995). Current issues in adolescent mental health. In D.T. Kenny and R.F.S. Job (Eds). *Australia's Adolescents: A Health Psychology Perspective*. Armidale: University of New England Press (pp 68-88).

**Kenny, D.T.** & Job, R.F.S. (Eds.) (1995). *Australia's adolescents: A health psychology perspective* (272 pages). Armidale: University of New England Press ISBN 1 875821 24 4.

**(c) Child sexual abuse (CSA)**

I provide expert reports on child complainants and alleged adult sex offenders to Joint Investigative Response Teams and Child Abuse Teams within the NSW Police. I have current experience:

- (i) in counselling CSA victims.
- (ii) providing structural and psychological analysis of CSA victim statements. I have developed specific expertise in the assessment of child testimony in sexual abuse cases.
- (iii) reviewing video recordings of police interviews with alleged victims of CSA and providing commentary on the pertinent psychological issues.
- (iv) providing expert statements and reviews of literature on matters pertaining to child development in general and CSA in particular, for the ODPP, Police, JIRT, barristers, and court.
- (v) acting as an expert witness in cases of child sexual abuse, historical child sexual abuse, and paedophilia.
- (vi) I have given evidence in court and have been cross-examined.
- (vii) I have extensive knowledge of the child abuse literature and have written a book on the subject (see below).
- (viii) I am able to provide comprehensive literature reviews on most subjects related to child sexual abuse.
- (ix) I have publications – book, journal articles, monographs – on sex offending and have served on ministerial committees within the NSW Department of Juvenile Justice and the NSW Department of Corrective Services.

Key publications:

**Kenny, D.T.** (2018). *Children, sexuality, and child sexual abuse*. East Sussex, UK: Routledge.

This book has become a seminal text in the field because of its wide-ranging coverage and attention to all the recent research in the field, including the *Royal Commission into Institutional Responses to Child Sexual Abuse*. It covers all the key topics in child sexual abuse, including the nature of disclosures, both immediate and delayed, and their reliability; normal memory development and distortions of memory that can occur from a range of environmental influences including leading and suggestive interviewing; impacts of child sexual abuse, including short- and long-term consequences; assessment and forensic analysis of witness statements, and psychological analysis of CSA victim statements.

**Kenny, D.T.** (1997). Opinion, policy and practice in child sexual abuse: Implications for detection and reporting. In M. James (Ed.). *Paedophilia: Policy and prevention*. Research and Public Policy Series No 12: Australian Institute of Criminology, Sydney, Australia. ISSN 1326-6004. (pp 14-31).

In addition, last year I wrote a major report on paedophilia for the Child Abuse Squad, Ballina, addressing the question as to whether an individual in possession of child abuse material is a paedophile. This question had not been explicitly dealt with in the literature. Accordingly, I undertook major research on the subject and produced a report that the presiding judge allowed to be admitted into evidence to demonstrate tendency. The solicitor for the ODPP advised me that my report “may create a precedent for use in future similar matters.”



**(d) Juvenile offending and juvenile sex offending**

For a number of years, I chaired or was a member of several committees within the NSW Department of Juvenile Justice and the New South Wales Department of Corrective Services, including Chair, Ministerial Steering Committee, NSW Department of Juvenile Justice Collaborative Research Unit, Chair, Research and Ethics Subcommittee, NSW Department of Juvenile Justice Collaborative Research Unit, Chair, Ministerial Steering Committee on Sexual Offending, New South Wales Department of Corrective Services, A/Chair and Member, Ministerial Reference Group on Sexual Offending, New South Wales Department of Corrective Services.

**Kenny, D.T.**, Seidler, K., Keogh, T., & Blaszczynski, A., (2000). Offence and clinical characteristics of Australian juvenile sex offenders. *Psychiatry, Psychology, and the Law*, 7, 2, 212-227.

**Kenny, D.T.**, Keogh, T., & Seidler, K. (2001). Predictors of recidivism in Australian juvenile sex offenders. *Sexual Abuse: A Journal of Research and Treatment*, 13, 2, 131-148.

**Kenny, D.T.**, & Nelson, P.K. (2008). *Young offenders on community orders: Health, welfare and criminogenic needs*. Sydney, Australia: Sydney University Press. ISBN 978-0-9804117-0-6.

**Kenny, D.T.** & Lennings, C. J. & Nelson, P. (2008). Mental health of young offenders serving orders in the community: Implications for rehabilitation. In Daniel W. Phillips III (Edited). *Mental Health Issues in the Criminal Justice System*. New York: Haworth Press.

**Kenny, D.T.** (2014). Mental health concerns and behavioural problems in young offenders in the criminal justice system. *Judicial Officers' Bulletin (Judicial Commission of NSW)*, 26 (4), 29-33.

**Kenny, D.T.** (2013). Violent young offenders in the criminal justice system. *Judicial Officers' Bulletin (Judicial Commission of NSW)*, 25 (3), 19-24.

**Kenny, D.T.** (2015). Juvenile sex offenders in the criminal justice system. *Judicial Officers' Bulletin, (Judicial Commission of NSW)*, 27 (4), 31-34.

**(e) Educational psychology**

During my earlier professional life, I worked as a school counsellor and specialist counsellor for emotionally disturbed children within the Division of Guidance and Special Education, NSW Department of Education. I was responsible for assessing children whose psychological difficulties were such that they could not be managed within the mainstream classroom. I undertook detailed assessments of their educational, social, and cognitive development in order to provide appropriate school placements for children who had significant trauma histories and intellectual disabilities.

Key publications:

**Kenny, D.T.** (2016). The adolescent brain: Implications for assessing young offenders' legal competence. *Judicial Officers' Bulletin (Judicial Commission of NSW)*, 28 (3), 23-27.

**Kenny, D.T.** (2012). Young offenders with an intellectual disability in the criminal justice system: Prevalence, profile, policy, planning and programming. *Judicial Officers' Bulletin (Judicial Commission of NSW)*, 24, 5, 35-42.

Jensen, P. Stevens, S., & **Kenny, D.T.** (2012). Effects of yoga breathing on the behaviour and attention of boys with ADHD. *Journal of Child and Family Studies*, 2, 4, 667-681. DOI 10.1007/s10826-011-9519-3.

**Kenny, D.T.** & Frize, M. (2010). Intellectual disability, Aboriginal status and risk of re-offending in

young offenders on community orders. Special Edition, *Indigenous Law Bulletin*, 7, 18, 14-19

**Kenny, D.T., & Faunce, G. (2004).** Effects of academic coaching on elementary and secondary school students. *Journal of Educational Research*, 98, 2, 115-126.

**Kenny, D.T. (1992).** Can teachers be tests? A comparison of teacher ratings and test assessments of early reading performance. In H. Motoaki, J. Misumi, J. B. Wilport (Eds). *Social, Educational and Clinical Psychology*, Vol 3, pp 177-178. London: Lawrence Erlbaum Associates.

**Kenny, D.T. (1989).** The effect of grade repetition on the academic performance and social/emotional adjustment of infant and primary students. In Luszcz M. and Nettlebeck T. (Eds). *Psychological development: Perspectives across the lifespan*, pp 261-271. North Holland: Elsevier Science Publisher B.V.

#### **(f) Family Therapy and Family Dispute Resolution**

I assist parents to reach parenting agreements with respect to shared parental responsibility of their children following separation and divorce. I also undertake mediation with respect to property settlements. I undertook an 18-month training program with Relationships Australia in marriage and family therapy, in which capacity I work with families to resolve conflict, attachment ruptures, relationship stresses, and behavioural difficulties.

Having dual qualifications in both family therapy and family dispute resolution places me in an ideal position to assess families in custody disputes in relation to parenting capacity, shared parental responsibility and allegations of emotional, physical and sexual abuse. In these capacities I have provided parenting capacity reports to both family law solicitors and barristers, the Family Court and the Children's Court.

Key publication:

Kwok, E. & **Kenny, D.T. (2015).** The application of collaborative practice to misattributed paternity disputes. *Australasian Dispute Resolution Journal*, 26, 127- 136.

#### **Other Major Consultancies, Invited Commissioned Reports and Invited Submissions to Government Inquiries**

Kenny, D.T. (April, 2011). The NSW Law Reform Commission (NSW LRC). Consultation Paper 11. *Young people with cognitive and mental health impairments in the criminal justice system*, Roundtable.

Kenny, D.T. (2009). Submission on bullying to the NSW Legislative Council General Purpose Standing Committee No 2.

Kenny, D.T. & Lennings, C. (2007). *Provisional sentencing of serious young offenders*. NSW Sentencing Council. Department of the Attorney General.

Kenny, D.T., Nelson, P., Butler, T., Lennings, C., Allerton, M., & Champion, U. (2006). *Young people on community orders health survey: Key findings report*. Sydney, Australia: University of Sydney ISBN: 1 86487 845 2

Allerton, M., Champion, U., Kenny, D.T., Butler, T. et al (2003). 2003 *Young people in custody health survey*. NSW Department of Juvenile Justice ISBN 0 7347 6518 5

Kenny, D.T. & Hunter, J. (2003). *Review of psychological services and specialist programs in the NSW*



*Department of Juvenile Justice*. Commonwealth Cost and Quality of Government (Internal Audit Bureau). (170 pages).

Kenny, D.T. (1996). *The effects of television/movie/video violence on the behaviour of children and adolescents*. Invited submission from the Australian Family Association (NSW Branch) to the Federal Government's Committee of Ministers on the 'Portrayal of Violence.'

### ***Professional contributions in Psychology and the Law***

#### **Journal Reviewer**

1. Frontiers in Psychology
2. Journal of Child Sexual Abuse
3. Sexual Abuse: A Journal of Research and Treatment
4. Psychology and the Law
5. International Journal of Offender Therapy and Comparative Criminology
6. Clinical Psychology Review
7. Journal of Sexual Abuse and Treatment
8. Behavioral and Brain Functions
9. Archives of Clinical Psychiatry
10. Australian Psychologist

#### **Other invited presentations (selected)**

Kenny, D.T. (2017). *Institutional Child Sexual Abuse*. Invited paper to the Local Court of NSW Annual Conference (2-7 August), Sydney, Australia.

Kenny, D.T. (2013). Young offenders in the juvenile justice system: A story of violence, intellectual disability, substance abuse, alienation and social disadvantage. Invited paper to *The Children's Court Magistrates' Section 16 meeting* (2 November). Sydney, Australia.

Kenny, D.T. (2011). Risks and needs of indigenous offenders: physical and mental health. Invited paper to A weekend conference for judicial officers and Aboriginal community members, *Judicial Commission of NSW* (10-11 September). Sydney, Australia.

Kenny, D.T. (2009). Intellectual disability and Indigenous status are predictors of recidivism in young offenders. Invited paper to the *Australian Institute of Criminology Conference* (1 September), Parramatta, Australia.

Kenny, D.T. (2009). Young offenders: the importance of compensatory attachments and the role of teachers. Keynote paper to the *NSW Department of Education Principals' Conference* (April), Sydney, Australia.

Kenny, D.T. (2007). Juvenile sex offenders: Theory into practice. Invited paper to the *Australian and New Zealand Association for the Treatment of Sex Abuse* (21 June). Blacktown, Sydney.

Kenny, D.T. (2007). Cognitive and educational problems of young offenders. *School Education Directors of Education Twilight Seminars* (26 June). Sydney, Australia.

Kenny, D.T. (2006). Physical and mental needs of young offenders. *Disability Strategic Group*, NSW Department of Juvenile Justice (August). Sydney, Australia.

- Kenny, D.T. (2005). Impact of violence classification on its relationship to psychological factors and mental health. *Prisoner Health Research Symposium*, JusticeHealth (18 February). Sydney, Australia.
- Kenny, D.T., Vecchiato, C., Allerton, M., Kenny, D.T. (2003). Young People in Custody Health Survey: Mental health. *Australian Institute of Criminology Conference* (1-2 December). Sydney, Australia.
- Kenny, D.T. (2002). Predictors of recidivism in juvenile sex offenders: Lessons for prevention. *Jocelyn Wale Distinguished Scholar Series* (23 June). James Cook University, Queensland.
- Kenny, D.T., Keogh, T., & Seidler, K. (2001). Developmental and clinical characteristics of juvenile sex offenders: Predictors of recidivism and implications for treatment. *Inaugural Australian Forensic Psychology Conference* (February). Sydney, Australia.
- Kenny, D.T. (1999). *Recidivism prediction model for juvenile sex offenders*. Invited presentation to the Minister for Juvenile Justice, Carmel Tebbutt MLC, and the Collaborative Research Unit, NSW Department of Juvenile Justice.